SAMSUNG

User Manual

SyncMaster S23A950D / S27A950D

The color and the appearance may differ depending on the product, and the specifications are subject to change without prior notice to improve the performance.

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Copyright

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An administration fee may be charged if either (a) an engineer is called out at your request and there is no defect in the product (i.e. where you have failed to read this user manual). (b) you bring the unit to a repair centre and there is no defect in the product (i.e. where you have failed to read this user manual). The amount of such administration charge will be advised to you before any work or home visit is carried out.

Icons used in this manual

	The following images are for reference only. Real-life situations may differ from what is shown in the images.

Symbols for safety precautions

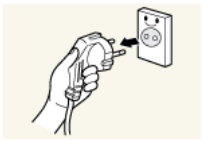
Warning	A serious or fatal injury may result if instructions are not followed.
Caution	Personal injury or damage to properties may result if instructions are not followed.
	Activities marked by this symbol are prohibited.
	Instructions marked by this symbol must be followed.

Cleaning

Cleaning

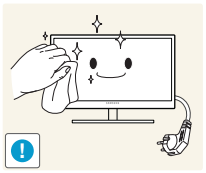
Exercise care when cleaning as the panel and exterior of advanced LCDs are easily scratched.

Take the following steps when cleaning.



1. Power off the monitor and computer.
2. Disconnect the power cord from the monitor.

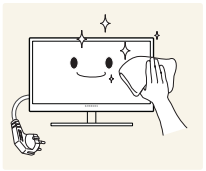
Hold the power cable by the plug and do not touch the cable with wet hands. Otherwise, an electric shock may result.



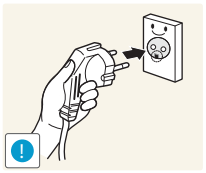
3. Wipe the monitor with a clean, soft and dry cloth.

- Do not apply a cleaning agent that contains alcohol, solvent, or surfactant to the monitor.

- Do not spray water or detergent directly on the product.



4. Wet a soft and dry cloth in water and wring thoroughly to clean the exterior of the monitor.

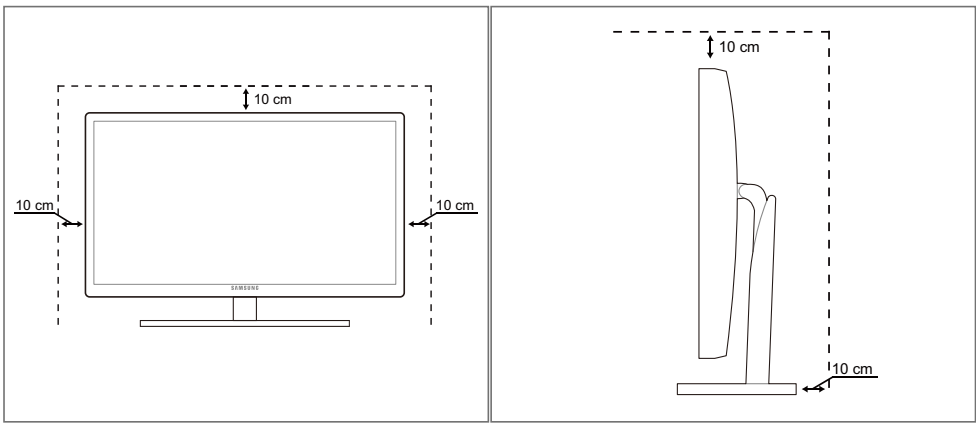


5. Connect the power cord to the product after cleaning the product.
6. Power on the monitor and computer.

Securing the Installation Space

- Ensure some space around the product for ventilation. An internal temperature rise may cause fire and damage the product. Be sure to allow the amount of space as shown below or greater when installing the product.

The appearance may differ depending on the product.



Precautions for storage

High-glossy models can develop white stains on the surface if an ultrasonic wave humidifier is used nearby.

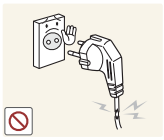
Be sure to contact Samsung Customer Service Center (page 81) if the inside of the monitor needs cleaning. (service fee will be charged).

Safety Precautions

Electricity and Safety

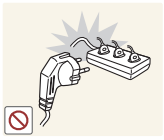
The following images are for reference only. Real-life situations may differ from what is shown in the images.

Warning



Do not use a damaged power cord or plug, or a loose power socket.

- An electric shock or fire may result.

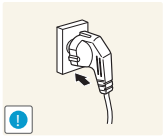


Do not plug many products into the same power socket.

- Otherwise, the socket may overheat and cause a fire.

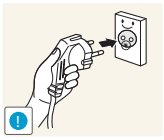
Do not touch the power plug with wet hands.

- Otherwise, an electric shock may result.



Insert the power plug all the way in so it is not loose.

- An unstable connection may cause a fire.



Connect the power plug to a grounded power socket (type 1 insulated devices only).

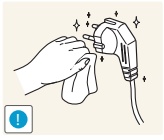
- An electric shock or injury may result.

Do not bend or pull the power cord with force. Do not weigh the power cord down with a heavy object.

- A damaged power cord may cause an electric shock or fire.

Do not place the power cord or product near heat sources.

- An electric shock or fire may result.



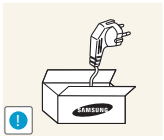
Remove foreign substances such as dust around the plug pins and power socket with a dry cloth.

- Otherwise, a fire may result.

Caution

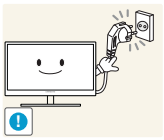
Do not unplug the power cord when the product is in use.

- The product may become damaged by an electric shock.



Do not use the power cord for products other than authorized products supplied by Samsung.

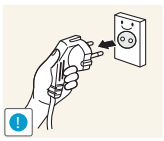
- An electric shock or fire may result.



Keep the power socket where the power cord is connected unobstructed.

- If any problem occurs in the product, unplug the power cable to completely cut the power to the product.

  Power to the product cannot be completely cut off with the power button.



Hold the plug when disconnecting the power cord from the power socket.

- An electric shock or fire may result.

Installation

Warning

DO NOT PLACE CANDLES,INSECT REPELLANTS OR CIGARETTES ON TOP OF THE PRODUCT.DO NOT INSTALL THE PRODUCT NEAR HEAT SOURCES.

- Otherwise, a fire may result.

Avoid installing the product in a narrow space with bad ventilation, such as a bookshelf or wall closet.

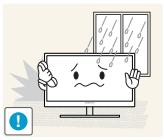
- Otherwise, a fire may result due to an increased internal temperature.

Keep the plastic packaging bag for the product in a place that cannot be reached by children.

- Children may suffocate.

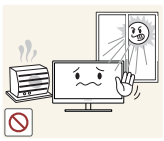
Do not install the product on an unstable or vibrating surface (insecure shelf, sloped surface, etc.).

- The product may fall and break or cause a personal injury.
- Using the product in an area with excess vibration may damage the product or cause a fire.



Do not install the product in a vehicle or a place exposed to dust, moisture (water drips, etc.), oil, or smoke.

- An electric shock or fire may result.



Do not expose the product to direct sunlight, heat, or a hot object such as a stove.

- Otherwise, the product lifespan may be reduced, or a fire may result.

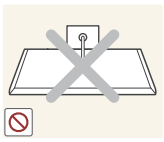
Do not install the product within the reach of young children.

- The product may fall and injure children.

Caution

Take care not to drop the product when moving it.

- Otherwise, product failure or personal injury may result.

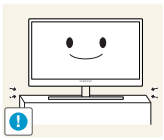


Do not set down the product on its front.

- The screen may become damaged.

When installing the product on a cabinet or shelf, make sure that the bottom edge of the front of the product is not protruding.

- The product may fall and break or cause a personal injury.
- Install the product only on cabinets or shelves of the right size.



Put down the product carefully.

- The product may fall and break or cause a personal injury.

Installing the product in an unusual place (a place exposed to a lot of fine particles, chemical substances or extreme temperatures, or an airport or train station where the product should operate continuously for an extended period of time) may seriously affect its performance.

- Be sure to consult Samsung Customer Service Center (page 81) before installation if you want to install the product at such a place.

Operation

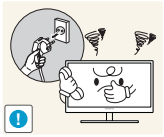
Warning

High voltage runs through the product. Do not attempt to disassemble, repair, or modify the product on your own.

- An electric shock or fire may result.
- Contact Samsung Customer Service Center (page 81) for repair.

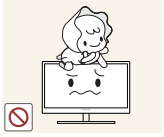
Before moving the product, turn off the power switch and disconnect the power cable and all other connected cables.

- Otherwise, the power cord may be damaged and a fire or electric shock may result.



If the product generates a strange noise, a burning smell, or smoke, remove the power cord immediately and contact Samsung Customer Service Center (page 81).

- An electric shock or fire may result.



Do not let children hang from the product or climb on top of it.

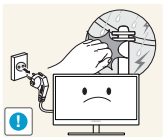
- The product may fall, and your child may become injured or seriously harmed.

If the product falls or the exterior is damaged, power off the product, remove the power cord, and contact Samsung Customer Service Center (page 81).

- Otherwise, an electric shock or fire may result.

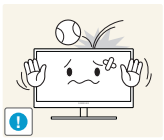
Do not put a heavy object, toy, or sweets on top of the product.

- The product or heavy objects may fall as children try to reach for the toy or sweets resulting in a serious injury.



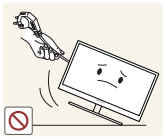
During a lightning or thunderstorm, power off the product and remove the power cable.

- An electric shock or fire may result.



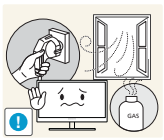
Do not drop objects on the product or apply impact.

- An electric shock or fire may result.



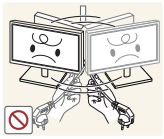
Do not move the product by pulling the power cord or any cable.

- Otherwise, the power cable may be damaged and product failure, an electric shock or fire may result.



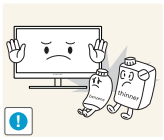
If a gas leakage is found, do not touch the product or power plug. Also, ventilate the area immediately.

- Sparks can cause an explosion or fire.



Do not lift or move the product by the power cord or any cable.

- Otherwise, the power cable may be damaged and product failure, an electric shock or fire may result.



Do not use or keep combustible spray or an inflammable substance near the product.

- An explosion or fire may result.

Ensure the vents are not blocked by tablecloths or curtains.

- Otherwise, a fire may result from an increased internal temperature.

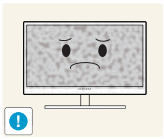
Do not insert a metallic object (a chopstick, coin, hair pin, etc.) or inflammable object (paper, match, etc.) into the vent or ports of the product.

- If water or any foreign substance enters the product, be sure to power off the product, remove the power cord, and contact Samsung Customer Service Center (page 81).
- Product failure, an electric shock or fire may result.

Do not place objects containing liquid (vases, pots, bottles, etc) or metallic objects on top of the product.

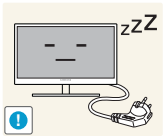
- If water or any foreign substance enters the product, be sure to power off the product, remove the power cord, and contact Samsung Customer Service Center (page 81).
- Product failure, an electric shock or fire may result.

Caution



Leaving the screen fixed on a stationary image for an extended period of time may cause afterimage burn-in or defective pixels.

- If you are not going to use the product for an extended period of time, activate power-saving mode or a moving-picture screen saver.

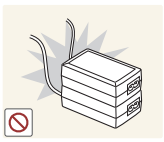


Disconnect the power cord from the power socket if you do not plan on using the product for an extended period of time (vacation, etc).

- Otherwise, a fire may result from accumulated dust, overheating, an electric shock, or electric leakage.

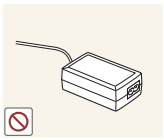
Use the product at the recommended resolution and frequency.

- Your eyesight may deteriorate.



Do not put DC power adapters together.

- Otherwise, a fire may result.



Remove the plastic bag from the DC power adapter before you use it.

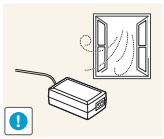
- Otherwise, a fire may result.

Do not let water enter the DC power device or get the device wet.

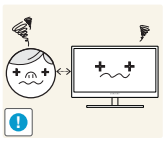
- An electric shock or fire may result.
- Avoid using the product outdoors where it can be exposed to rain or snow.
- Be careful not to get the DC power adapter wet when you wash the floor.

Do not put the DC power adapter near to any heating apparatus.

- Otherwise, a fire may result.



Keep the DC power adapter in a well-ventilated area.



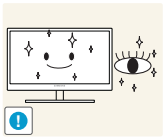
Looking at the screen too close for an extended period of time can deteriorate your eyesight.

Do not hold the monitor upside-down or move it by holding the stand.

- The product may fall and break or cause a personal injury.

Do not use humidifiers or stoves around the product.

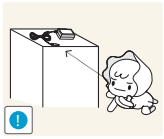
- An electric shock or fire may result.



Rest your eyes for more than 5 minutes for every 1 hour of product use.

- Eye fatigue will be relieved.

Do not touch the screen when the product has been turned on for an extended period of time as it will become hot.



Store the small accessories used with the product out of reach of children.

Exercise caution when adjusting the product angle or stand height.

- Otherwise, children's fingers or hands may become stuck and injured.
- Tilting the product excessively may cause it to fall and result in personal injury.

Do not place heavy objects on the product.

- Product failure or personal injure may result.

When using headphones or earphones, do not turn the volume too high.

- Having the sound too loud may damage your hearing.

Correct posture to use the product

Use the product in the correct posture as follows:

- Straighten your back.
- Allow a distance of 45 to 50cm between your eye and the screen, and look slightly downward at the screen.

  Keep your eyes directly in front of the screen.
- Adjust the angle so light does not reflect on the screen.
- Keep your forearms perpendicular to your upper arms and level with the back of your hands.
- Keep your elbows at about a right angle.
- Adjust the height of the product so you can keep your knees bent at 90 degrees or more, your heels attached to the floor, and your arms lower than your heart.

Caution

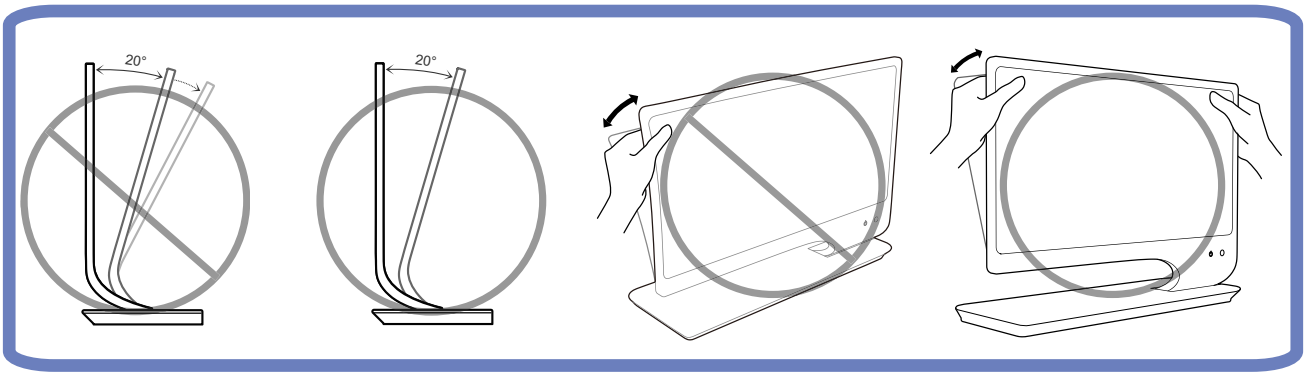


Table Of Contents

BEFORE USING THE PRODUCT

2 **Copyright**
3 Icons used in this manual
3 Symbols for safety precautions

4 **Cleaning**
4 Cleaning
5 Securing the Installation Space
5 Precautions for storage

5 **Safety Precautions**
5 Electricity and Safety
7 Installation
9 Operation

13 **Correct posture to use the product**

PREPARATIONS

19 **Checking the Contents**
19 Removing the Packaging
20 Checking the Components

21 **Parts**
21 Frontal Buttons
23 Reverse Side
24 Tidying Up the Connected Cables
24 Kensington Lock
25 Adjusting the Product Tilt

3D

26 **3D**
26 **3D** Mode
27 **Depth**
28 **L/R Change**
28 **3D2D**

29 **Standard HDMI-Compatible Formats**

29 **Resolution Supported for PC Input (via the HDMI Port)**

30 **Playing 3D Games on a PC**

31 **Precautions when Viewing 3D Video**

Table Of Contents

CONNECTING AND USING A SOURCE DEVICE

32 **Before Connecting**
32 Pre-connection Checkpoints
32 **Connecting the Power**
33 **Connecting and Using a PC**
33 Connecting to a PC
35 Driver Installation
36 Setting Optimum Resolution
37 Changing the Resolution Using a PC
39 **Connecting to a Video Device**
39 Connection Using the HDMI Cable
39 **Connecting Headphones**

SCREEN SETUP

40 **MAGIC**
40 **SAMSUNG MAGIC Angle**
41 **SAMSUNG MAGIC Bright**
42 Configuring **SAMSUNG MAGIC Color**
43 **Brightness**
43 Configuring **Brightness**
43 **Contrast**
44 Configuring **Contrast**
44 **Sharpness**
44 Configuring **Sharpness**
45 **Response Time**
45 Configuring **Response Time**
45 **HDMI Black Level**

CONFIGURING TINT

47 **Red**
47 Configuring **Red**
47 **Green**
47 Configuring **Green**

Table Of Contents

48 **Blue**
48 Configuring **Blue**

48 **Color Tone**
49 Configuring the **Color Tone** Settings

50 **Gamma**
50 Configuring **Gamma**

RESIZING OR RELOCATING THE SCREEN

51 **Image Size**
51 Changing the **Image Size**

52 **H-Position**
52 Configuring **H-Position**

52 **V-Position**
52 Configuring **V-Position**

53 **Menu H-Position**
53 Configuring **Menu H-Position**

53 **Menu V-Position**
54 Configuring **Menu V-Position**

SETUP AND RESET

55 **ECO**
55 **Eco Motion Sensor**
56 **Eco Light Sensor**
58 **Eco Saving**
59 **Eco Icon Display**

61 **Menu Transparency**
61 Changing **Menu Transparency**

61 **Language**
61 Changing the **Language**

62 **PC/AV Mode**
62 Configuring **PC/AV Mode** Settings

63 **Auto Source**
63 Configuring **Auto Source**

Table Of Contents

63 **Display Time**
63 Configuring **Display Time**

64 **Key Repeat Time**
64 Configuring **Key Repeat Time**

65 **Customized Key**
65 Configuring **Customized Key**

65 **Off Timer On/Off**
65 Configuring **Off Timer On/Off**

66 **Off Timer Setting**
66 Configuring **Off Timer Setting**

67 **Reset**
67 Initializing Settings (**Reset**)

INFORMATION MENU AND OTHERS

68 **INFORMATION**
68 Displaying **INFORMATION**

68 **Configuring Brightness in the Startup Screen**

68 **Configuring Volume in the Startup Screen**

TROUBLESHOOTING GUIDE

70 **Requirements Before Contacting Samsung Customer Service Center**
70 Testing the Product
70 Checking the Resolution and Frequency
70 Check the followings.

73 **Q & A**

SPECIFICATIONS

75 **General**

77 **PowerSaver**

78 **Standard Signal Mode Table**

Table Of Contents

APPENDIX

81 Contact SAMSUNG WORLD WIDE

87 Correct Disposal of This Product (Waste Electrical & Electronic Equipment)

88 Terminology

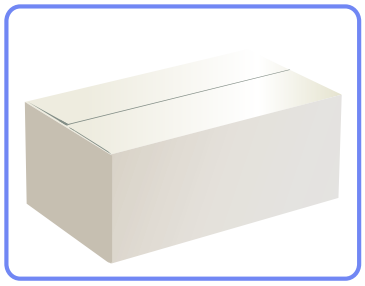
INDEX

1 Preparations

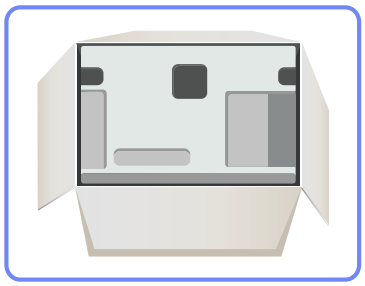
1.1 Checking the Contents

1.1.1 Removing the Packaging

1 Open the packaging box. Be careful not to damage the product when you open the packaging with a sharp instrument.

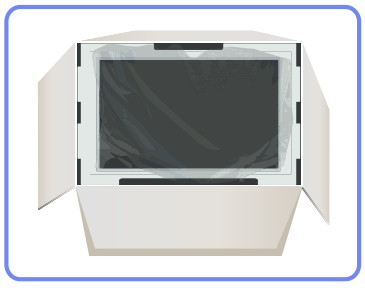


2 Remove the Styrofoam from the product.



3 Check the components and remove the Styrofoam and plastic bag.

- The appearance of actual components may differ from the image shown.
- This image is for reference only.



4 Store the box in a dry area so that it can be used when moving the product in the future.

1.1.2 Checking the Components

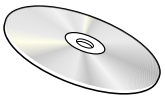
- Contact the dealer from whom you purchased the product if any item is missing.
- The appearance of the components and items sold separately may differ from the image shown.

Components

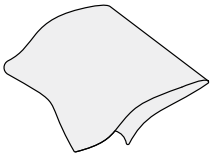
Quick Setup Guide

Warranty

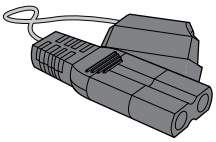
(Not available in some locations)



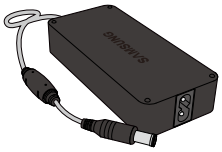
User Manual



Cleaning cloth

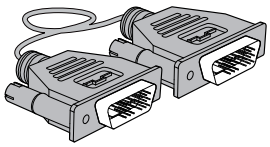


Power cable

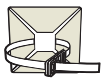


DC power adapter

3D Glasses & 3D Glasses User Manual



DVI-Dual cable



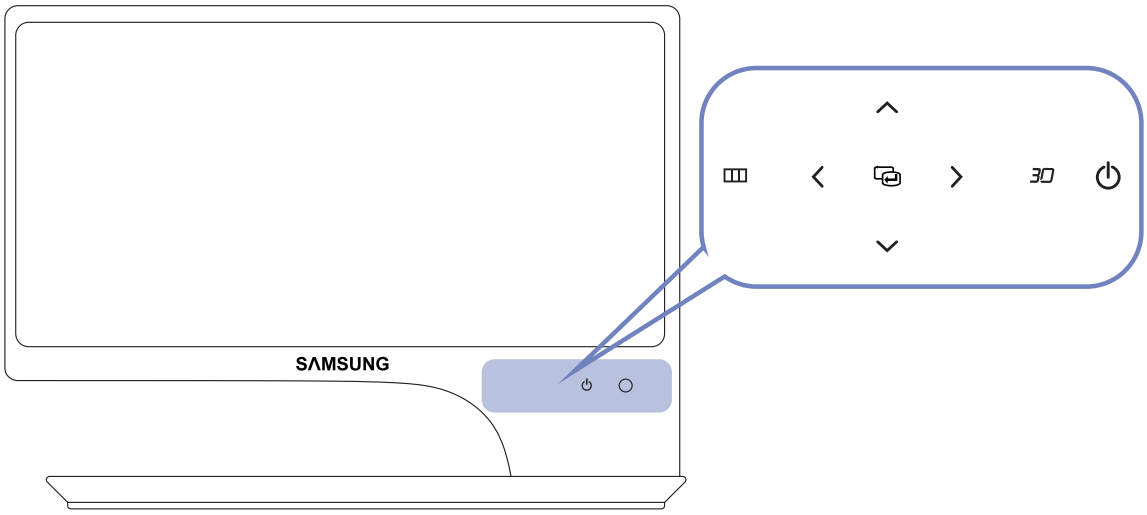
Wire holders

- Components may differ in different locations.
- The cleaning cloth is only supplied with the black high-glossy model.

1.2 Parts

1.2.1 Frontal Buttons

The color and shape of parts may differ from what is shown. Specifications are subject to change without notice to improve quality.

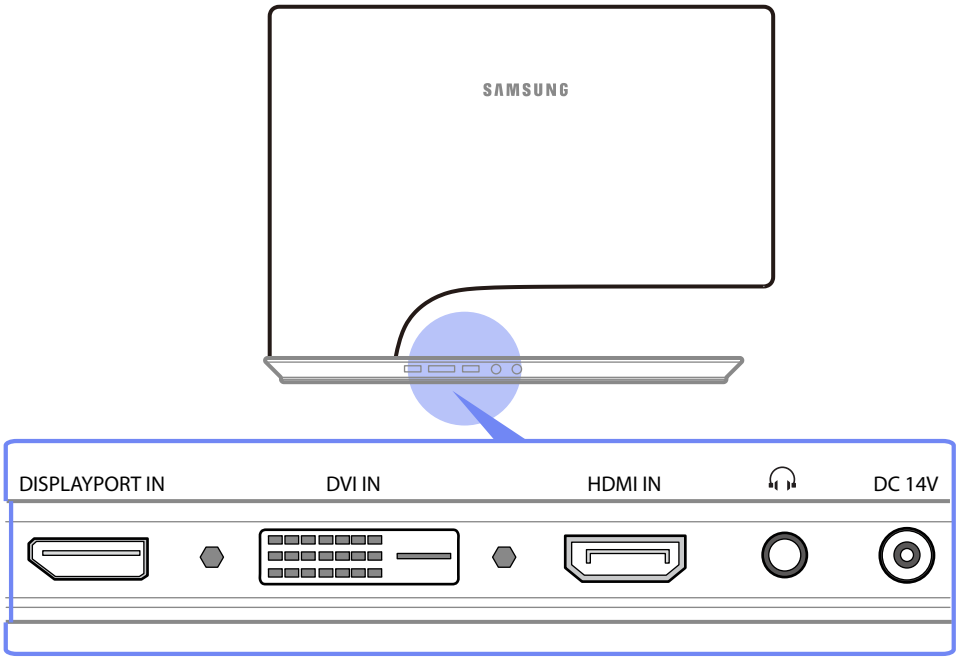


- If the MENU button is not visible, lightly tap the area around the [⏻] button. The MENU button will become visible.
- The onscreen display menu only appears when the MENU button light is lit.
- The button light will remain on for 10 seconds and then dim.

Icons	Description
⊞	• Open or close the onscreen display (OSD) menu, or return to the last menu. • OSD control lock: Maintain the current settings, or lock the OSD control to prevent unintended changes to settings. To lock the OSD control, press the MENU button [⊞] for five seconds. To unlock the locked OSD control, press the MENU button [⊞] for more than five seconds. If the OSD control is locked, • **Brightness**, **Contrast** and **3D** can be adjusted, and **INFORMATION** can be viewed. • The function that was configured as **Customized Key** before locking the OSD control can be used by pressing the [3D] button.
⏎	Confirm a menu selection. Pressing the [⏎] button when the OSD menu is not displayed will change the input source (**Digital**/**HDMI**/**DP**). If you power on the product or change the input source by pressing the [⏎] button, a message that shows the changed input source will appear at the top left corner of the screen.
∧/∨	Move to the upper or lower menu or adjust the value for an option on the OSD menu.
</>	Move to the left or right menu or adjust the value for an option on the OSD menu.
3D	Configure **Customized Key** and press [3D]. The following options will be enabled. **3D** - **ECO** - **MAGIC** - **Image Size** • To configure **Customized Key**, go to **SETUP&RESET** → **Customized Key** and select the mode you want.
⏻	Turn the screen on or off. The power indicator will be lit when the product is operating normally. • This is a touch-type button. Tap the button lightly with a finger. • Refer to "10.2 PowerSaver" for details about the power-saving function. • To reduce power consumption, it is best to remove the power cable when you will not be using the product for an extended period of time.

1.2.2 Reverse Side

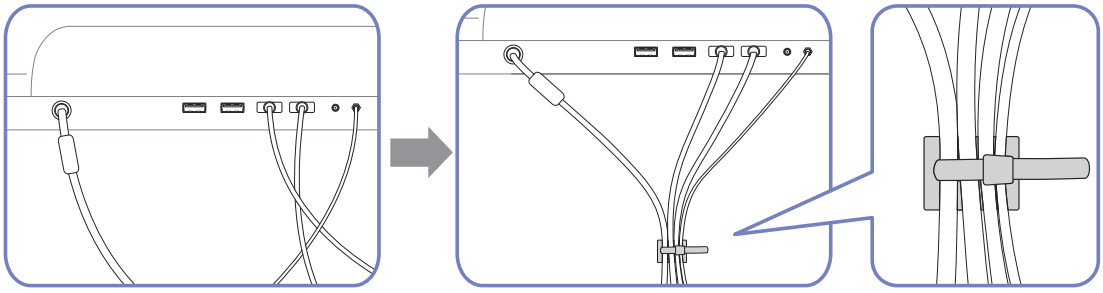
The color and shape of parts may differ from what is shown. Specifications are subject to change without notice to improve quality.



Port	Description
	Connects to a source device using an DP cable.
	Connects to a source device via a DVI cable.
	Connects to a source device using an HDMI cable.
	Connects to an audio output device such as headphones.
	Connects to the DC power adapter.

1.2.3 Tidying Up the Connected Cables

Tidy up the cables using the cable holder on the back of the stand.



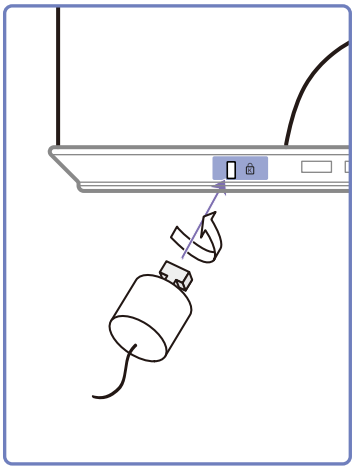
The color and shape of parts may differ from what is shown. Specifications are subject to change without notice to improve quality.

1.2.4 Kensington Lock

An anti-theft lock allows you to use the product securely even in public places.

The locking device shape and locking method depend on the manufacturer. Refer to the user guide provided with your anti-theft locking device for details.

To lock an anti-theft locking device:

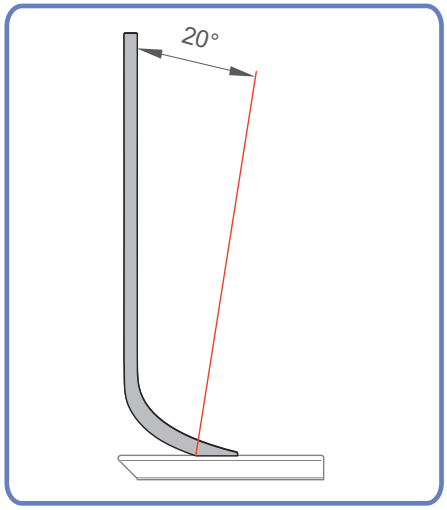


1. Fix the cable of your anti-theft locking device to a heavy object such as a desk.
2. Put one end of the cable through the loop on the other end.
3. Insert the locking device into the anti-theft lock slot at the back of the product.
4. Lock the locking device.

- An anti-theft locking device can be purchased separately.
- Refer to the user guide provided with your anti-theft locking device for details.
- Anti-theft locking devices can be purchased at electronics retailers or online.

1.2.5 Adjusting the Product Tilt

The color and shape of parts may differ from what is shown. Specifications are subject to change without notice to improve quality.



- You can adjust the tilt of your monitor.
- Hold the lower part of the product and adjust the tilt carefully.

2 3D

This feature allows you to view 3D content such as 3D movies. You can view 3D content using(SyncMaster-dedicated) Samsung 3D glasses.

2.1 3D

- You can purchase "SyncMaster-dedicated 3D glasses (model name: SSG-M3750CR)" separately. Contact the dealer you purchased the product from for details about purchasing the 3D glasses.
- The product may not be compatible with 3D glasses other than the model specified above.
- Power off the 3D glasses if you will not be using them. Otherwise, the battery life will decrease.
- When you configure the display settings initially, change the frequency to 120Hz using the display settings menu on the Windows desktop.

  *System requirements to play 3D PC games

Basic Video Signal	Recommended connection		Operating systems supported	
If an AMD HD5000 series graphics card or higher is used	DVI-D	Display images in FullHD Real 120Hz mode	Windows 7, Vista	Recommended
Other graphics cards, such as an nVIDIA graphics card or a graphics card lower than AMD HD5000 series	DVI-D	Display images in Side-by-side 60Hz mode	Windows 7, Vista, XP	

Important Health and Safety Information about Watching 3D Content

Warning. Please read the following safety information carefully before you use the 3D function.

- Some viewers may experience dizziness, nausea or headaches when viewing 3D video. If this occurs, stop viewing 3D video immediately, take off the 3D glasses, and rest.
- Viewing 3D video for an extended period of time may cause eye fatigue. If you experience eye fatigue, stop viewing 3D video, take off the 3D glasses, and rest.
- Children must be constantly monitored by adults when using the 3D function. If your child shows any symptom such as eye fatigue, headache, dizziness, or nausea, stop the child from watching 3D video immediately to rest.
- Do not use the 3D glasses for other purposes such as general eyeglasses, sunglasses, protective goggles, etc.
- Do not use the 3D function or 3D glasses while moving. You may trip or fall and become injured.

2.1.1 3D Mode

Select the appropriate mode for the video input, and view 3D video.

Put on the 3D glasses, and select whichever 3D mode that offers the best 3D effect from **3D Mode**.

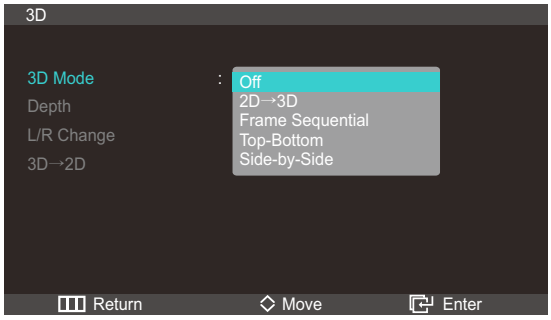
Configuring the 3D Mode

1 Press [ ] on the product.

2 Press [∧/∨] to move to **Picture** and press [ ] on the product.

3 Press [∧/∨] to move to **3D** and press [ ] on the product.

4 Press [∧/∨] to move to **3D Mode** and press [ ] on the product. The following screen will appear.



- **Off**: Disable the 3D Mode function.
- **2D → 3D**: Converts a normal video to 3D video.
- **Frame Sequential**: Display the left and right images alternately in each frame.
- **Top-Bottom:** Display the top and bottom images overlapping each other to allow you to experience the 3D effect.
- **Side-By-Side**: Display the left and right images overlapping each other to allow you toexperience the 3D effect.

5 Press [∧/∨] to move to the option you want and press the [ ].

6 The selected option will be applied.

2.1.2 Depth

Determines the three-dimensional effect of the 3D video.

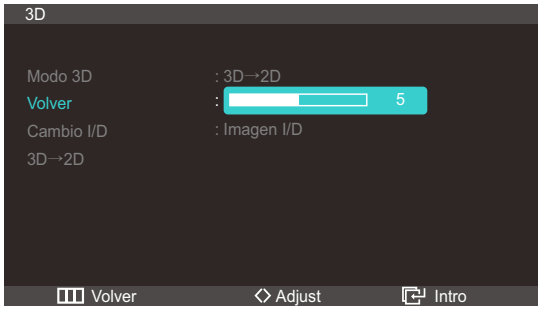
Configuring Depth

1 Press [ ] on the product.

2 Press [∧/∨] to move to **Picture** and press [ ] on the product.

3 Press [∧/∨] to move to **3D** and press [ ] on the product.

4 Press [∧/∨] to move to **Depth** and press [⏎] on the product. The following screen will appear.



5 Adjust the **Depth** using the [</>] button.

6 The selected option will be applied.

2.1.3 L/R Change

Switch the left image to the right image, and vice versa.

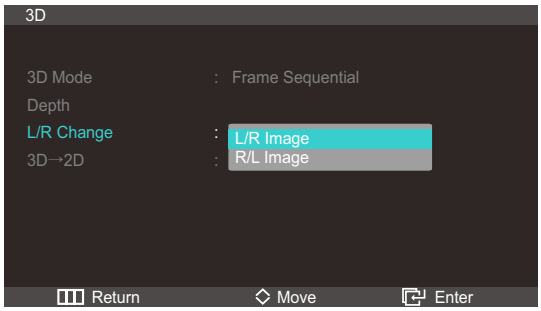
Configuring the L/R Change

1 Press [▥] on the product.

2 Press [∧/∨] to move to **Picture** and press [⏎] on the product.

3 Press [∧/∨] to move to **3D** and press [⏎] on the product.

4 Press [∧/∨] to move to **L/R Change** and press [⏎] on the product. The following screen will appear.



- **L/R Image**
- **R/L Image**

5 Press [∧/∨] to move to the option you want and press the [⏎].

6 The selected option will be applied.

2.1.4 3D → 2D

Activates 2D screen mode.

This function is turned off when **3D** is **2D** → **3D** or **Off**.

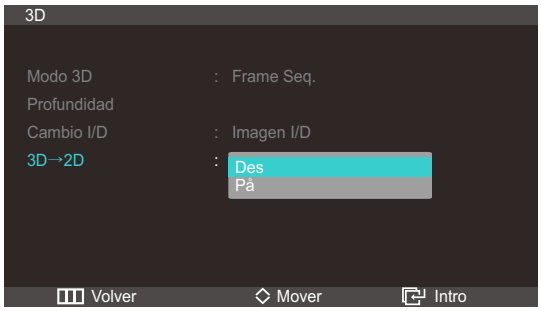
Configuring the 3D → 2D

1 Press [ ] on the product.

2 Press [∧/∨] to move to **Picture** and press [ ] on the product.

3 Press [∧/∨] to move to **3D** and press [ ] on the product.

4 Press [∧/∨] to move to **3D** → **2D** and press [ ] on the product. The following screen will appear.



- **Off**
- **On**

5 Press [∧/∨] to move to the option you want and press the [ ].

6 The selected option will be applied.

2.2 Standard HDMI-Compatible Formats

The 3D formats indicated below are recommended by the HDMI association and must be supported.

Basic Video Signal	Standard HDMI 3D
1920x1080p @24Hz	1920x2205p @24Hz
1280x720p @60Hz	1280x1470p @60Hz

2.3 Resolution Supported for PC Input (via the HDMI Port)

PC input is optimized for video in 1920x1080 resolution. If the resolution is not 1920 x 1080, the 3D picture is not properly displayed and you cannot watch the 3D picture in full screen.

2.4 Playing 3D Games on a PC

First, install the SyncMaster 3D GAME Launcher (TriDef 3D) software.

SyncMaster 3D Game Launcher (TriDef 3D) is a game driver that allows you to play games in 3D on a PC.

1. Set your monitor as the default monitor for the PC.
2. Install the "SyncMaster 3D Game Launcher (TriDef 3D)" software provided on a CD.
   - Install the software following the instructions displayed.
   - Alternatively, download and install the software from www.tridef.com/syncmaster.
3. Go to **Start** → **All Programs** → "TriDef 3D" → "SyncMaster 3D Game Launcher(TriDef 3D)".
4. To add compatible games, click **Search**. Alternatively, add games to "SyncMaster 3D Game Launcher(TriDef 3D)" using the following methods.
   - Drag the icon or execution file of a game on the desktop into the "SyncMaster 3D Game Launcher(TriDef 3D)" window.
   - Go to "File" and select "Add Games".
5. To play a game in 3D mode, double-click the game icon. Alternatively, select the game and click "Start".
6. Activate the 3D function on the product, and play the game wearing the 3D glasses.

   - Refer to the user guide for the 3D glasses for details about how to use the 3D glasses.
   - If the 3D glasses do not turn **On** even though 3D screen displays when playing a 3D game, press the 3D button to check that **Frame Sequential** is selected for **3D Mode**.

     Depending on the graphics card, **Frame Sequential** might not be selected automatically when playing a 3D game.

- Refer to "Online Help" for PC system requirements and details about how to use "SyncMaster 3D Game Launcher(TriDef 3D)".
- If you start a game from the desktop and not from "SyncMaster 3D Game Launcher(TriDef 3D)", the game will not be displayed in 3D.
- The minimum PC system requirements may vary depending on the 3D game. For details, refer to the home page or user guide for the 3D game you want to play.
- "SyncMaster 3D Game Launcher(TriDef 3D)"does not support PCs that are based on Macintosh or Linux operating systems.
- For Information
  - For further details about "TriDef 3D Games for SyncMaster(TriDef 3D)": please contact DDD Co., Ltd. www.tridef.com
  - For further details about the product, please contact Samsung Electronics.
- To find 3D-compatible games, visit www.tridef.com/syncmaster.

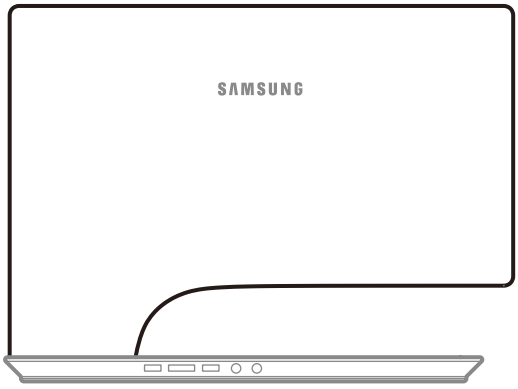
  "SyncMaster 3D Game Launcher(TriDef 3D)" is updated each time new games are added to the list of compatible games. Update the software periodically at www.tridef.com/syncmaster.

2.5 Precautions when Viewing 3D Video

- The 3D effect may be experienced differently depending on the viewer. You may not notice the 3D effect at all if you have a prescription for one eye that is very different from the other eye.
- When viewing a 3D video under a fluorescent lamp or 3-wavelength lamp, you may notice a small amount of screen flickering.
- Interference may cause the 3D glasses to malfunction if there is any other 3D product or electromagnetic device (a microwave or a device that uses 2.4 Ghz-bandwidth frequency such as an Internet router) turned on nearby. If an unintended operation of the 3D glasses occurs, it is best to remove other electromagnetic devices or wireless communication devices nearby.
- Visually-sensitive viewers may notice a slight screen flickering when viewing bright images in 50Hz, 3D video.
- Right after the monitor powers on, the left and right sides of 3D pictures may overlap more than usual. It may take a little time until the picture quality is optimized.
- In some countries, strong flickering may be experienced from the 3D glasses depending on the ambient light intensity. To minimize flicker when viewing a 3D picture, dim the light or change the frequency on the PC to 50Hz or 100Hz.

3 Connecting and Using a Source Device

3.1 Before Connecting

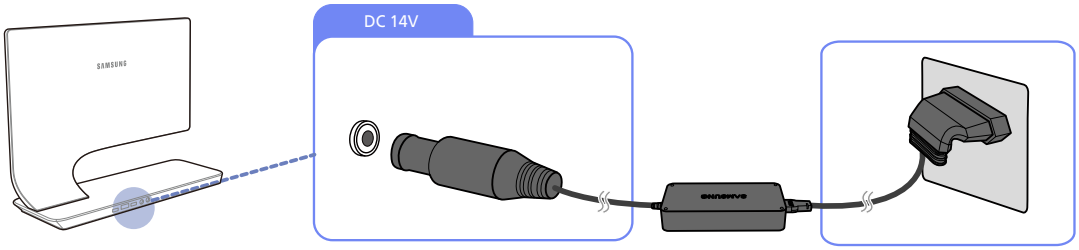


3.1.1 Pre-connection Checkpoints

- Before connecting a source device, read the user manual provided with it.
  The number and locations of ports on source devices may differ from device to device.
- Do not connect the power cable until all connections are completed.
  Connecting the power cable during connection may damage the product.
- Check the types of ports at the back of the product you want to connect.

3.2 Connecting the Power

- Connect the power adapter to [DC 14V] on the rear of the product. Connect the power cord to the adapter and wall socket. (The input voltage is switched automatically.)



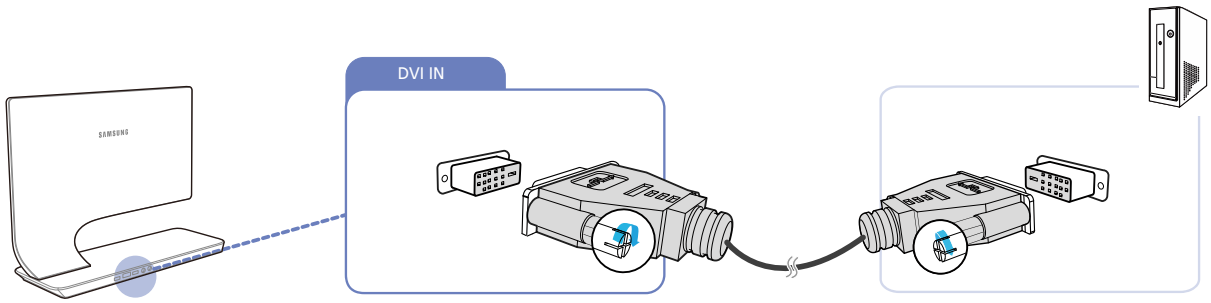
3.3 Connecting and Using a PC

3.3.1 Connecting to a PC

- Do not connect the power cable before connecting all other cables.
- Ensure you connect a source device first before connecting the power cable.
- Select a connection method suitable for your PC.

Connecting parts may differ in different products.

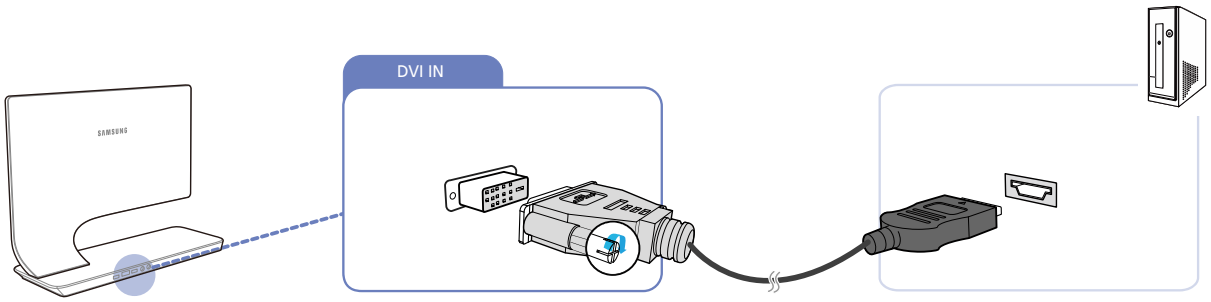
Connection Using the DVI Cable



1. Connect the DVI cable to the DVI port on the back of the product and the DVI port on the PC.
2. Connect the DC power adapter to the product and a power socket, and turn on the power switch on the PC.

Audio is not available if the PC and product are connected via the DVI port.

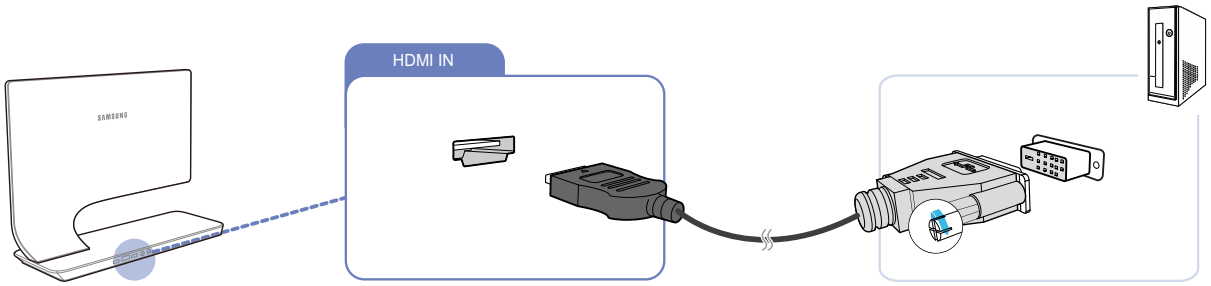
Connection Using an DVI-HDMI Cable



1. Connect the DVI-HDMI cable to the DVI port on the back of the product and the HDMI port on the PC.
2. Connect the DC power adapter to the product and a power socket, and turn on the power switch on the PC.

Audio is not available if the PC and product are connected via the DVI port.

Connection Using an HDMI-DVI Cable

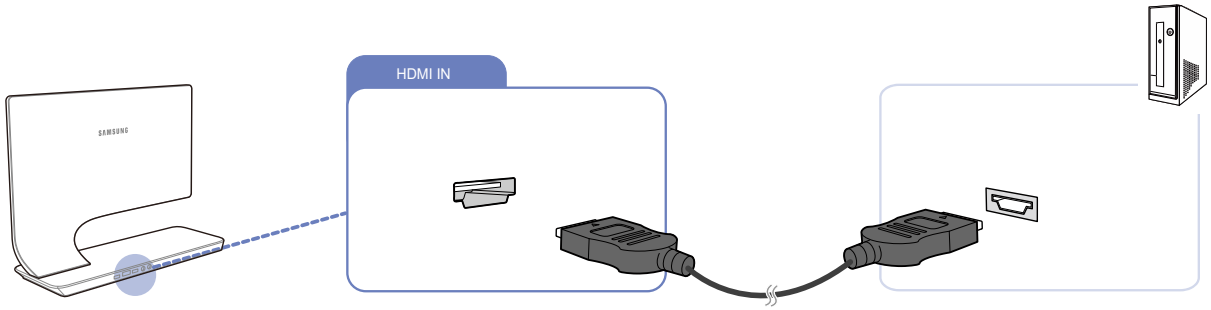


1 Connect the HDMI-DVI cable to the HDMI port on the back of the product and the DVI port on the PC.

2 Connect the DC power adapter to the product and a power socket, and turn on the power switch on the PC.

Audio is not available if the PC and product are connected via the HDMI-DVI port.

Connection Using an HDMI Cable (Digital Type)

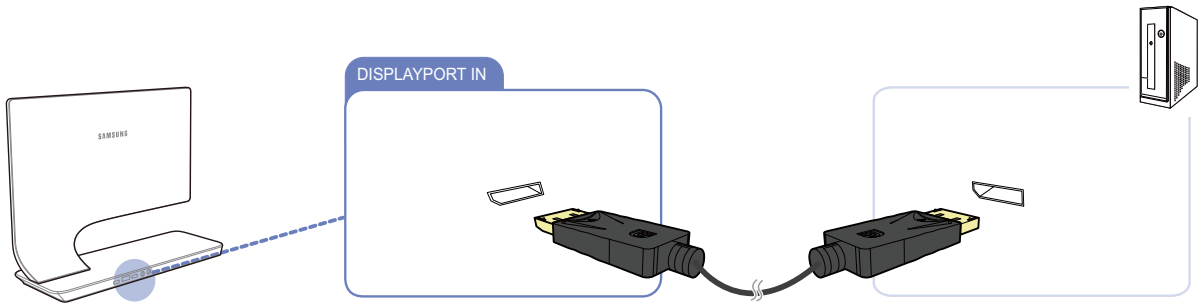


1 Connect the HDMI cable to the HDMI port on the back of the product and the HDMI port on the PC.

2 Connect the DC power adapter to the product and a power socket, and turn on the power switch on the PC.

Be sure to connect an audio output device such as headphones or speakers to [🎧] on the product to hear audio.

Connection Using an DP Cable (Digital Type)



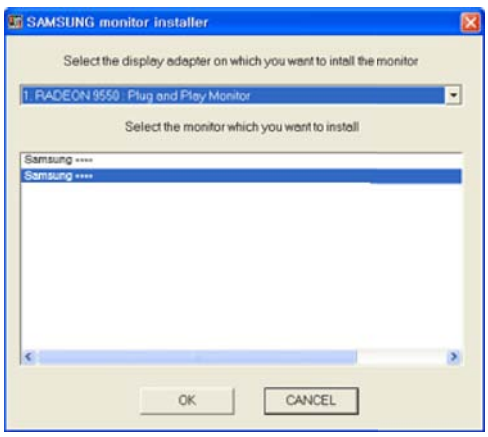
1. Connect the DP cable to the DP port on the back of the product and the DP port on the PC.
2. Connect the DC power adapter to the product and a power socket, and turn on the power switch on the PC.

Be sure to connect an audio output device such as headphones or speakers to [🎧] on the product to hear audio.

3.3.2 Driver Installation

- You can set the optimum resolution and frequency for this product by installing the corresponding drivers for this product.
- An installation driver is contained on the CD supplied with the product.
- If the file provided is faulty, visit the Samsung homepage (http://www.samsung.com) and download the file.

1. Insert the user manual CD provided with the product into the CD-ROM drive.
2. Click "Windows Driver".
3. Follow the instructions given on the screen to proceed with installation.
4. Select your product model from the list of models.


SAMSUNG monitor installer
Select the display adapter on which you want to intall the monitor
1. RADEON 9550 : Plug and Play Monitor
Select the monitor which you want to install
Samsung ****
Samsung ****
OK
CANCEL

5. Go to Display Properties and check that the resolution and refresh rate are appropriate.

   Refer to your Windows OS manual for further details.

3.3.3 Setting Optimum Resolution

An information message about setting optimum resolution will appear if you power on the product for the first time after purchase.

Select a language and change the resolution to the optimum value.

The optimal resolution for this monitor is as follows:
1920 x 1080 60Hz
Follow the above settings to get the resolution.
English
Language
Enter

1. Press [∧/∨] to move to the language you want and press the [⏎].
2. To hide the information message, press [▥].

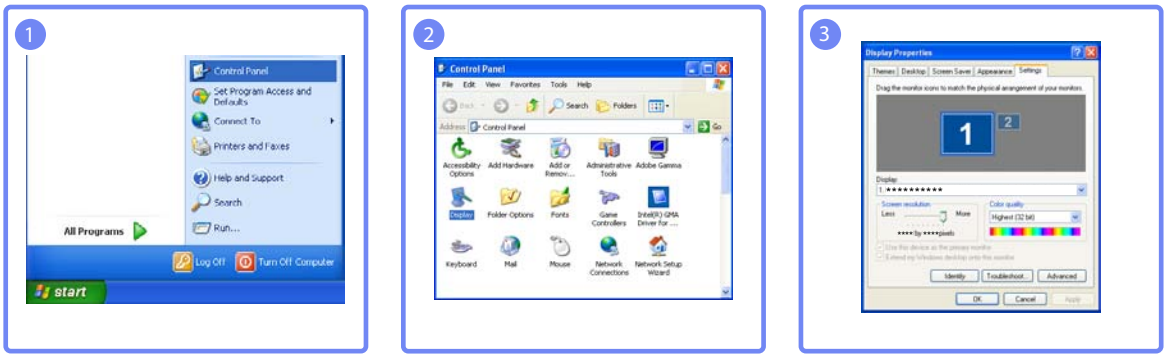
- If the optimum resolution is not selected, the message will appear up to three times for a specified time even when the product is turned off and on again.
- The optimum resolution (1920 x 1080) can also be selected in **Control Panel** on your PC.

3.3.4 Changing the Resolution Using a PC

- Adjust the resolution and refresh rate in Control Panel on your PC to obtain optimum picture quality.
- The picture quality of TFT-LCDs may degrade if the optimum resolution is not selected.

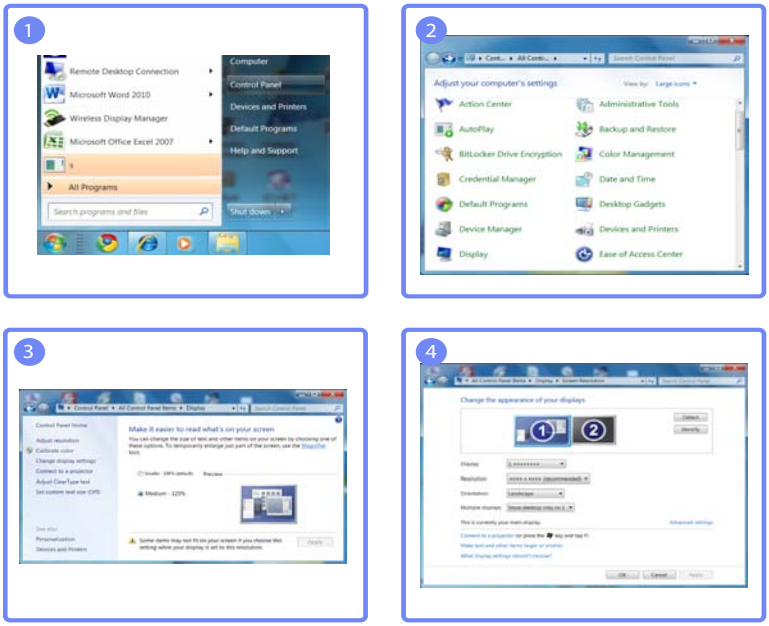
Changing the Resolution on Windows XP

Go to **Control Panel** → **Display** → **Settings** and change the resolution.



Changing the Resolution on Windows Vista

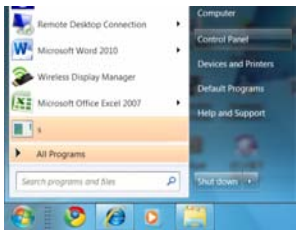
Go to **Control Panel** → **Personalization** → **Display Settings** and change the resolution.



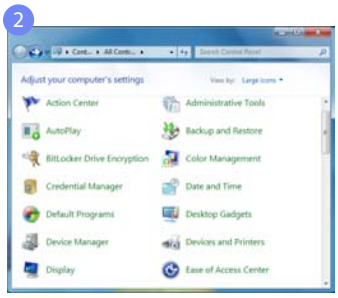
Changing the Resolution on Windows 7

Go to **Control Panel** → **Display** → **Screen Resolution** and change the resolution.

1



2



3

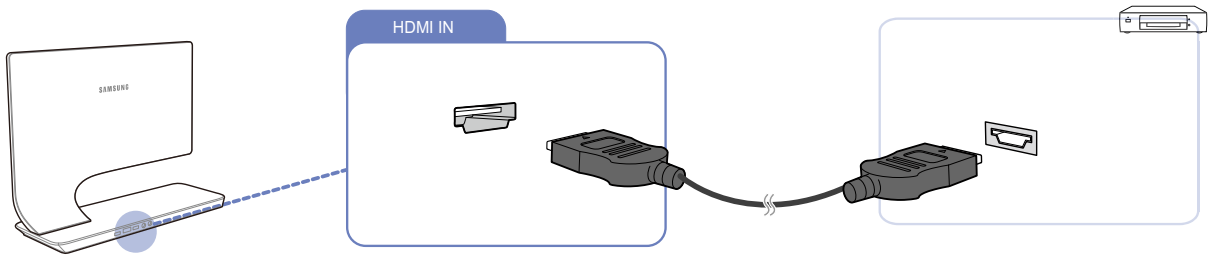
4

3.4 Connecting to a Video Device

- Do not connect the power cable before connecting all other cables.
- Ensure you connect a source device first before connecting the power cable.
- The product can be connected to a video device.

Connecting parts may differ in different products.

3.4.1 Connection Using the HDMI Cable

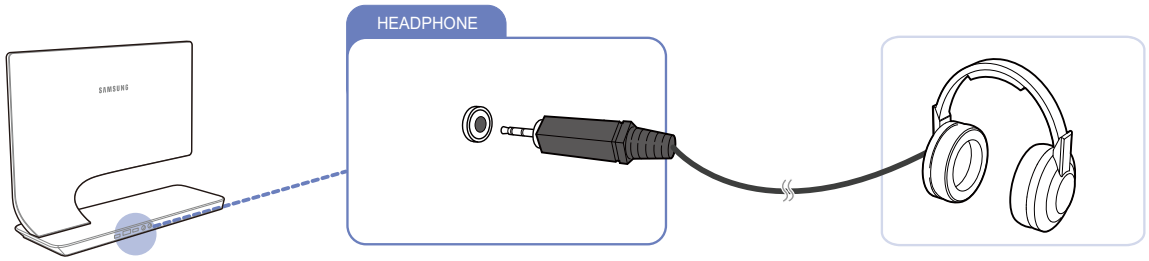


1 Connect an HDMI cable to the HDMI ports on the product and video device.

2 Press [⇆] to change the input source to **HDMI**.

Be sure to connect an audio output device such as headphones or speakers to [🎧] on the product to hear audio.

3.5 Connecting Headphones



- Connect an audio output device such as headphones or speakers to [🎧] on the product.

4 Screen Setup

Configure the screen settings such as brightness and color tone.

4.1 MAGIC

This feature provides the viewing angle, brightness, and tint to suit your preferences.

4.1.1 SAMSUNG MAGIC Angle

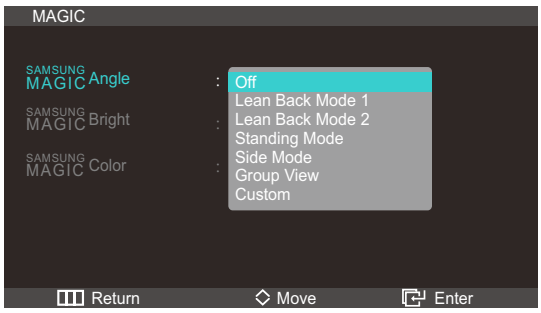
SAMSUNG MAGIC **Angle** allows you to configure the settings to obtain the optimum picture quality according to your viewing angle.

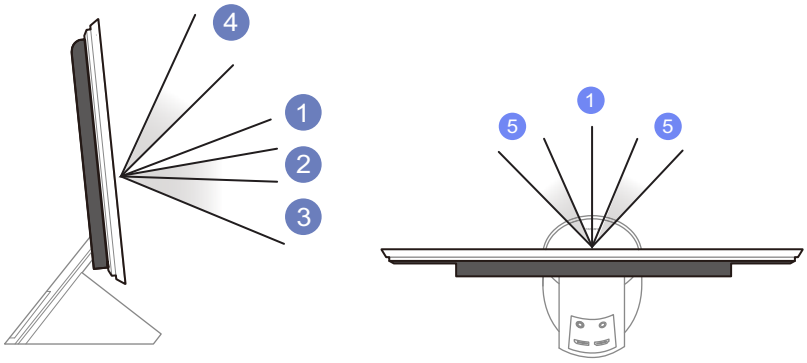
You can enjoy similar picture quality to when you view directly in front of the product by selecting a viewing mode appropriate for each viewing angle.

- This menu is not available when SAMSUNG MAGIC **Bright** is in **Cinema** or **Dynamic Contrast** mode.
- This menu is not available when SAMSUNG MAGIC **Color** is enabled.

Configuring SAMSUNG MAGIC Angle

1. Press [ ] on the product.
2. Press [∧/∨] to move to **Picture** and press [ ] on the product.
3. Press [∧/∨] to move to **MAGIC** and press [ ] on the product.
4. Press [∧/∨] to move to SAMSUNG MAGIC **Angle** and press [ ] on the product. The following screen will appear.





- **Off** ①: Select this option to view directly in front of the product.
- **Lean Back Mode 1** ②: Select this option to view from a place slightly lower than the product.

- **Lean Back Mode 2** ③: Select this option to view from a place lower than Lean Back Mode 1 ② mode.
- **Standing Mode** ④: Select this option to view from a place higher than the product.
- **Side Mode** ⑤: Select this option to view from either side of the product.
- **Group View**: Select this option for more than one viewer to view from places ①, ④ and ⑤.
- **Custom**: **Lean Back Mode 1** will be applied by default if **Custom** is selected.

5 Press [∧/∨] to move to the option you want and press the [⏎].

6 The selected option will be applied.

4.1.2 SAMSUNG MAGIC Bright

This menu provides an optimum picture quality suitable for the environment where the product will be used.

- This menu is not available when SAMSUNG MAGIC **Angle** is enabled.
- Sub-options under SAMSUNG MAGIC **Bright** may vary depending on the settings of "**PC/AV Mode**." (See "Chapter 7. **SETUP&RESET**.")

Configuring SAMSUNG MAGIC Bright

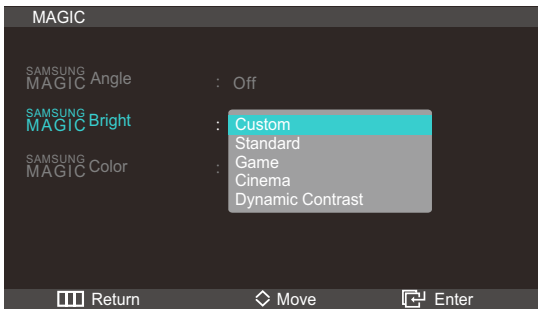
1 Press [▥] on the product.

2 Press [∧/∨] to move to **Picture** and press [⏎] on the product.

3 Press [∧/∨] to move to **MAGIC** and press [⏎] on the product.

4 Press [∧/∨] to move to SAMSUNG MAGIC **Bright** and press [⏎] on the product. The following screen will appear.

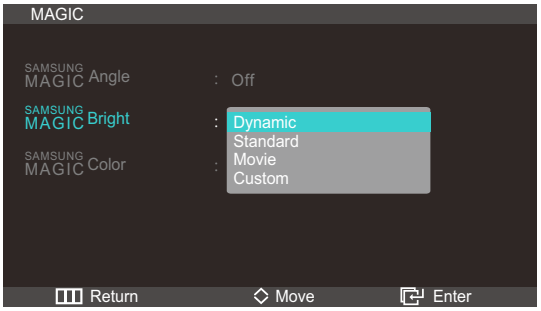
In **PC** mode



- **Custom**: Customize the contrast and brightness as required.
- **Standard**: Obtain a picture quality suitable for editing documents or using Internet.
- **Game**: Obtain a picture quality suitable for playing games that involve many graphic effects and dynamic movements.
- **Cinema**: Obtain the brightness and sharpness of TVs suitable for enjoying video and DVD content.

- **Dynamic Contrast**: Obtain balanced brightness through automatic contrast adjustment.

In **AV** mode



- **Dynamic**: This mode is suitable when the ambient light is bright.
- **Standard**: This mode is generally suitable for any environment.
- **Movie**: This mode reduces eye fatigue.
- **Custom**: Customize the contrast and brightness as required.

5 Press [∧/∨] to move to the option you want and press the [⏎].

6 The selected option will be applied.

4.1.3 Configuring SAMSUNG MAGIC Color

SAMSUNG MAGIC **Color** is a new picture-quality improvement technology developed independently by Samsung, which delivers vivid natural colors without picture quality degradation.

- This menu is not available when SAMSUNG MAGIC **Angle** is enabled.
- This menu is not available when SAMSUNG MAGIC **Bright** is in **Cinema** or **Dynamic Contrast** mode.

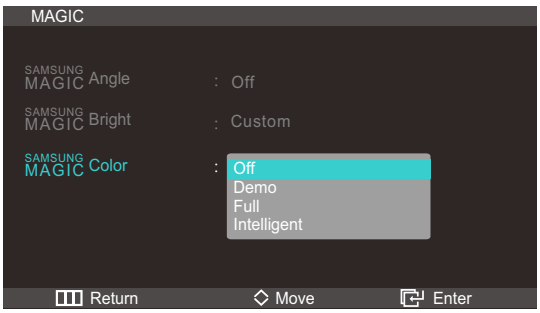
Configuring SAMSUNG MAGIC Color

1 Press [☰] on the product.

2 Press [∧/∨] to move to **Picture** and press [⏎] on the product.

3 Press [∧/∨] to move to **MAGIC** and press [⏎] on the product.

4 Press [∧/∨] to move to SAMSUNG MAGIC **Color** and press [⏎] on the product. The following screen will appear.



- **Off**: Disable SAMSUNG MAGIC **Color**.
- **Demo**: Compare normal screen mode with SAMSUNG MAGIC **Color** mode.
- **Full**: Obtain a vivid picture quality for all areas including the flesh colors in the picture.
- **Intelligent**: Improve the chroma for all areas except the flesh colors in the picture.

5 Press [∧/∨] to move to the option you want and press the [⏎].

6 The selected option will be applied.

4.2 Brightness

Adjust the general brightness of the picture. (Range: 0~100)

A higher value will make the picture appear brighter.

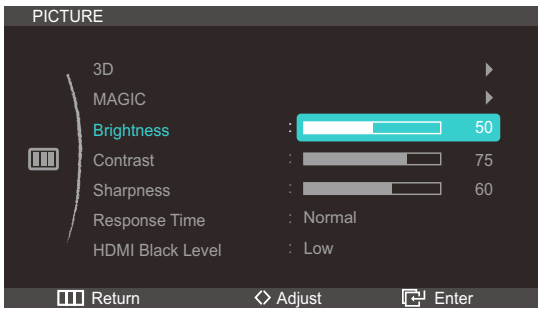
This menu is not available when SAMSUNG MAGIC **Bright** is in **Dynamic Contrast** mode.

4.2.1 Configuring Brightness

1 Press [⊞] on the product.

2 Press [∧/∨] to move to **Picture** and press [⏎] on the product.

3 Press [∧/∨] to move to **Brightness** and press [⏎] on the product. The following screen will appear.



4 Adjust the **Brightness** using the [</>] button.

4.3 Contrast

Adjust the contrast between the objects and background. (Range: 0~100)

A higher value will increase the contrast to make the object appear clearer.

- This menu is not available when SAMSUNG MAGIC **Color** is in **Full** or **Intelligent** mode.

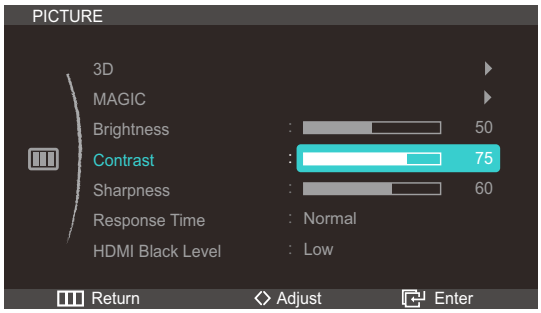
- This menu is not available when SAMSUNG MAGIC **Bright** is in **Cinema** or **Dynamic Contrast** mode.

4.3.1 Configuring Contrast

1 Press [ ] on the product.

2 Press [∧/∨] to move to **Picture** and press [ ] on the product.

3 Press [∧/∨] to move to **Contrast** and press [ ] on the product. The following screen will appear.



4 Adjust the **Contrast** using the [</>] button.

4.4 Sharpness

Make the outline of objects more clear or blurry. (Range: 0~100)

A higher value will make the outline of objects clearer.

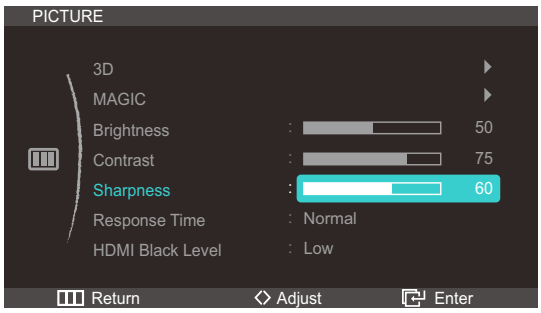
- This menu is not available when SAMSUNG MAGIC **Bright** is in **Cinema** or **Dynamic Contrast** mode.
- This menu is not available when SAMSUNG MAGIC **Color** is in **Full** or **Intelligent** mode.

4.4.1 Configuring Sharpness

1 Press [ ] on the product.

2 Press [∧/∨] to move to **Picture** and press [ ] on the product.

3 Press [∧/∨] to move to **Sharpness** and press [ ] on the product. The following screen will appear.



4 Adjust the **Sharpness** using the [</>] button.

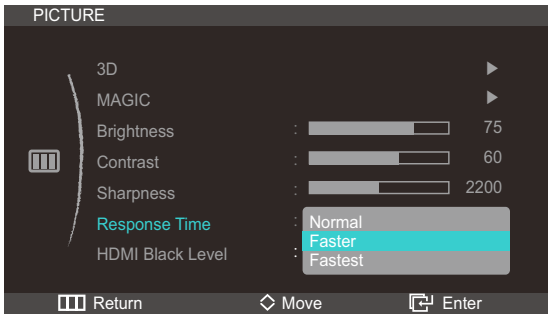
4.5 Response Time

Accelerate the panel response rate to make video appear more vivid and natural.

- It is best to set **Response Time** to **Normal** or **Faster** when you are not viewing a movie.
- The functions available on the monitor may vary depending on the model. Refer to the actual product.

4.5.1 Configuring Response Time

1. Press [ ] on the product.
2. Press [∧/∨] to move to **Picture** and press [ ] on the product.
3. Press [∧/∨] to move to **Response Time** and press [ ] on the product. The following screen will appear.



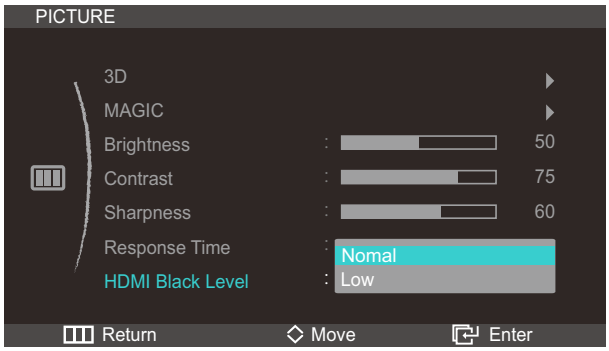
4. Press [∧/∨] to move to the option you want and press the [ ].
5. The selected option will be applied.

4.6 HDMI Black Level

If a DVD player or set-top box is connected to the product via **HDMI**, image quality degradation (contrast/color degradation, black level, etc.) may occur, depending on the connected source device. In such case, **HDMI Black Level** can be used to adjust the image quality.

1. Press [ ] on the product.
2. Press [∧/∨] to move to **Picture** and press [ ] on the product.

3 Press [∧/∨] to move to **HDMI Black Level** and press [⏎] on the product. The following screen will appear.



- **Normal**: Select this mode when there is no contrast ratio degradation.
- **Low**: Select this mode to reduce the black level and increase the white level when there is a contrast ratio degradation.

4 Press [∧/∨] to move to the option you want and press the [⏎].

5 The selected option will be applied.

- The **HDMI Black Level** function is available only when a source device is connected to the product via HDMI. Ensure the input source is RGB.
- **HDMI Black Level** may not be compatible with some source devices.

5 Configuring Tint

Adjust the tint of the screen. This menu is not available when SAMSUNG MAGIC **Bright** is set to **Cinema** or **Dynamic Contrast** mode.

5.1 Red

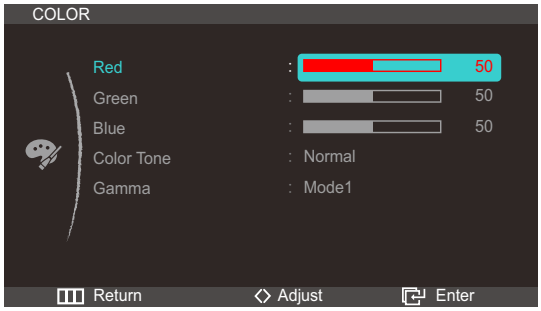
Adjust the value of the color red in the picture. (Range: 0~100)

A higher value will increase the intensity of the color.

This menu is not available when SAMSUNG MAGIC **Color** is in **Full** or **Intelligent** mode.

5.1.1 Configuring Red

1. Press [ ] on the product.
2. Press [∧/∨] to move to **COLOR** and press [ ] on the product.
3. Press [∧/∨] to move to **Red** and press [ ] on the product. The following screen will appear.



4. Adjust the **Red** using the [</>] button.

5.2 Green

Adjust the value of the color green in the picture. (Range: 0~100)

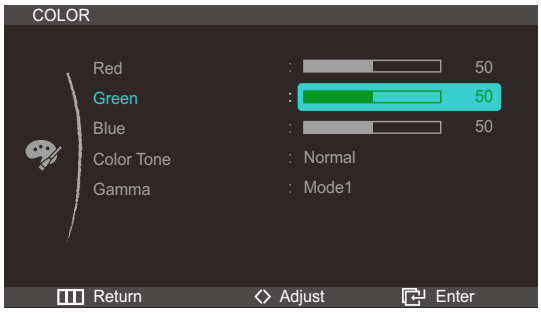
A higher value will increase the intensity of the color.

This menu is not available when SAMSUNG MAGIC **Color** is in **Full** or **Intelligent** mode.

5.2.1 Configuring Green

1. Press [ ] on the product.
2. Press [∧/∨] to move to **COLOR** and press [ ] on the product.

3 Press [∧/∨] to move to **Green** and press [⏎] on the product. The following screen will appear.



4 Adjust the **Green** using the [</>] button.

5.3 Blue

Adjust the value of the color blue in the picture. (Range: 0~100)

A higher value will increase the intensity of the color.

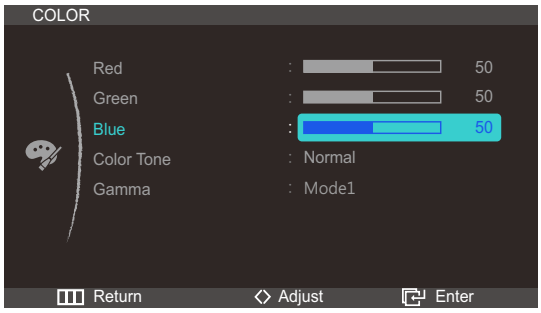
This menu is not available when SAMSUNG MAGIC **Color** is in **Full** or **Intelligent** mode.

5.3.1 Configuring Blue

1 Press [⊞] on the product.

2 Press [∧/∨] to move to **COLOR** and press [⏎] on the product.

3 Press [∧/∨] to move to **Blue** and press [⏎] on the product. The following screen will appear.



4 Adjust the **Blue** using the [</>] button.

5.4 Color Tone

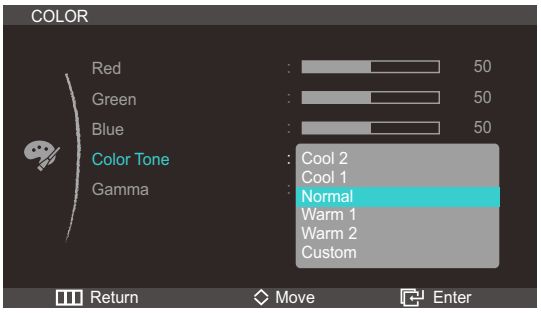
Adjust the general color tone of the picture.

- This menu is not available when SAMSUNG MAGIC **Angle** is enabled.
- This menu is not available when SAMSUNG MAGIC **Color** is in **Full** or **Intelligent** mode.

5.4.1 Configuring the Color Tone Settings

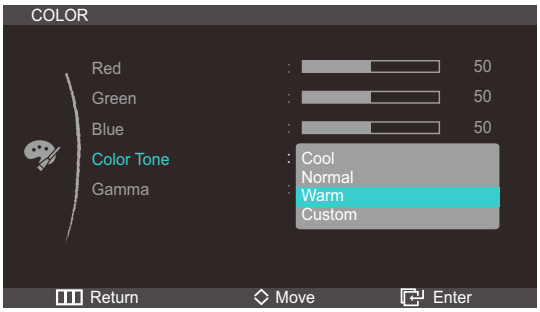
1. Press [ ] on the product.
2. Press [∧/∨] to move to **COLOR** and press [ ] on the product.
3. Press [∧/∨] to move to **Color Tone** and press [ ] on the product. The following screen will appear.

In **PC** mode



- **Cool 2**: Set the color temperature to be cooler than **Cool 1**.
- **Cool 1**: Set the color temperature to be cooler than **Normal** mode.
- **Normal**: Display the standard color tone.
- **Warm1**: Set the color temperature to be warmer than **Normal** mode.
- **Warm2**: Set the color temperature to be warmer than **Warm 1**.
- **Custom**: Customize the color tone.

In **AV** mode



- **Cool**: Set the color temperature to be cooler than **Normal** mode.
- **Normal**: Display the standard color tone.
- **Warm**: Set the color temperature to be warmer than **Normal** mode.
- **Custom**: Customize the color tone.

4. Press [∧/∨] to move to the option you want and press the [ ].
5. The selected option will be applied.

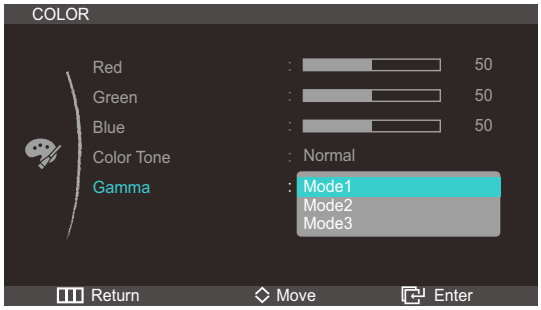
5.5 Gamma

Adjust the mid-range brightness (Gamma) of the picture.

This menu is not available when SAMSUNG MAGIC Angle is enabled.

5.5.1 Configuring Gamma

1. Press [ ] on the product.
2. Press [∧/∨] to move to **COLOR** and press [ ] on the product.
3. Press [∧/∨] to move to **Gamma** and press [ ] on the product. The following screen will appear.



4. Press [∧/∨] to move to the option you want and press the [ ].
5. The selected option will be applied.

6 Resizing or Relocating the Screen

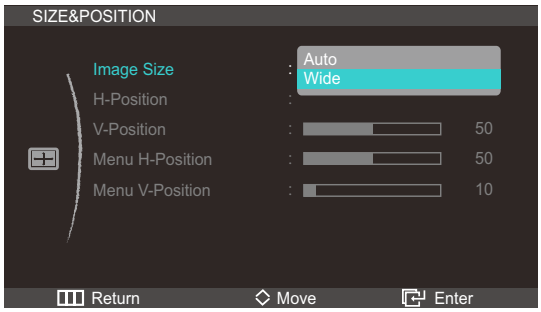
6.1 Image Size

Change the picture size.

6.1.1 Changing the Image Size

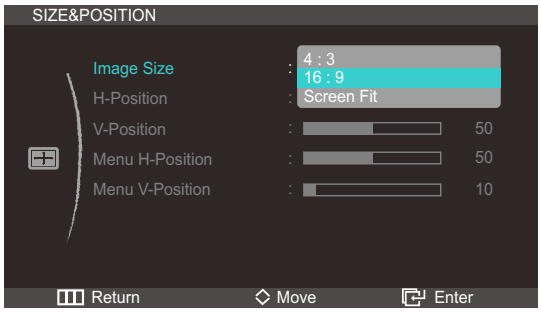
1. Press [ ] on the product.
2. Press [∧/∨] to move to **SIZE&POSITION** and press [⏎] on the product.
3. Press [∧/∨] to move to **Image Size** and press [⏎] on the product. The following screen will appear.

In **PC** mode



- **Auto**: Display the picture according to the aspect ratio of the input source.
- **Wide**: Display the picture in full screen regardless of the aspect ratio of the input source.

In **AV** mode



- **4:3**: Display the picture with an aspect ratio of 4:3. Suitable for videos and standard broadcasts.
- **16:9**: Display the picture with an aspect ratio of 16:9. Suitable for DVD content or widescreen broadcasts.
- **Screen Fit**: Display the picture with the original aspect ratio without cutting off.

Refer to "7.4 PC/AV Mode" for details about **PC/AV Mode**.

4. Press [∧/∨] to move to the option you want and press the [⏎].
5. The selected option will be applied.

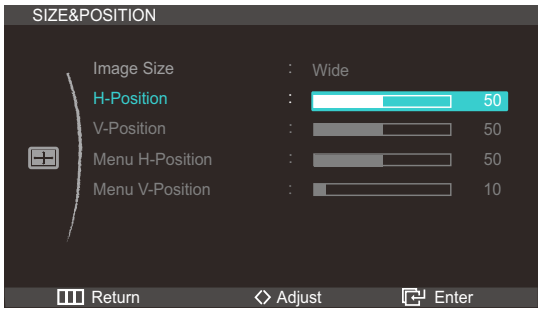
6.2 H-Position

Move the screen to the left or right.

Available only when **Size** is set to **Screen Fit**.

6.2.1 Configuring H-Position

1. Press [ ] on the product.
2. Press [∧/∨] to move to **SIZE&POSITION** and press [ ] on the product.
3. Press [∧/∨] to move to **H-Position** and press [ ] on the product. The following screen will appear.



4. Adjust the **H-Position** using the [</>] button.

6.3 V-Position

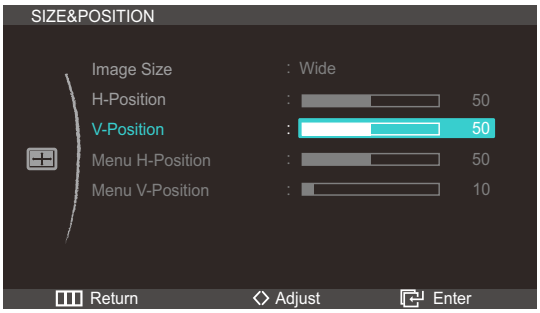
Move the screen up or down.

Available only when **Size** is set to **Screen Fit**.

6.3.1 Configuring V-Position

1. Press [ ] on the product.
2. Press [∧/∨] to move to **SIZE&POSITION** and press [ ] on the product.

3 Press [∧/∨] to move to **V-Position** and press [⏎] on the product. The following screen will appear.



4 Adjust the **V-Position** using the [</>] button.

6.4 Menu H-Position

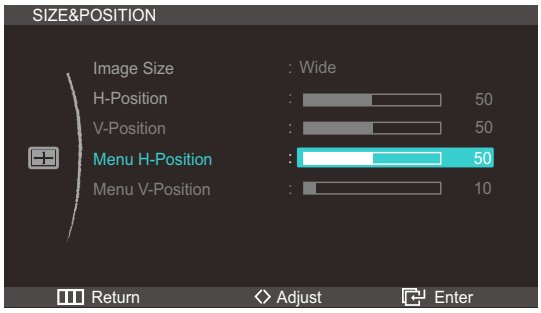
Move the menu position to the left or right.

6.4.1 Configuring Menu H-Position

1 Press [▥] on the product.

2 Press [∧/∨] to move to **SIZE&POSITION** and press [⏎] on the product.

3 Press [∧/∨] to move to **Menu H-Position** and press [⏎] on the product. The following screen will appear.



4 Adjust the **Menu H-Position** using the [</>] button.

6.5 Menu V-Position

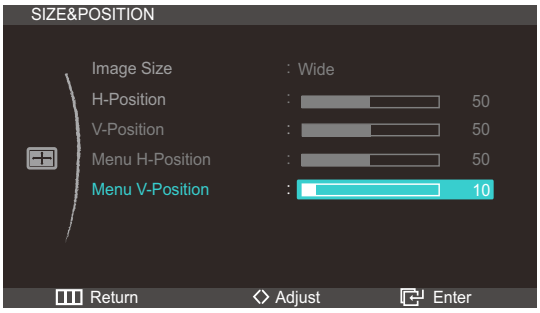
Move the menu position up or down.

6.5.1 Configuring Menu V-Position

1 Press [ ] on the product.

2 Press [∧/∨] to move to **SIZE&POSITION** and press [ ] on the product.

3 Press [∧/∨] to move to **Menu V-Position** and press [ ] on the product. The following screen will appear.



4 Adjust the **Menu V-Position** using the [</>] button.

7.1 ECO

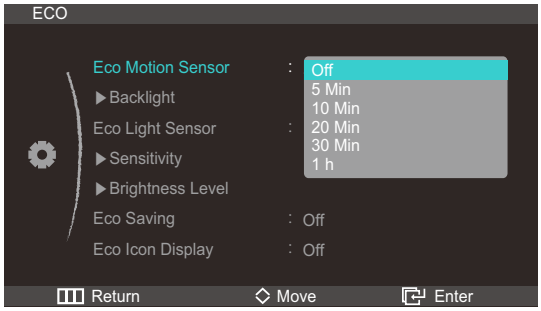
Adjust the power consumption of the product to save energy.

7.1.1 Eco Motion Sensor

The **Eco Motion Sensor** activates to save power when it does not detect any movement within a specified area for a specified period of time.

Configuring the Eco Motion Sensor

1. Press [ ] on the product.
2. Press [∧/∨] to move to **SETUP&RESET** and press [ ] on the product.
3. Press [∧/∨] to move to **ECO** and press [ ] on the product.
4. Press [∧/∨] to move to **Eco Motion Sensor** and press [ ] on the product. The following screen will appear.



This option is disabled if the product is connected to a PC that is in power-saving mode.

- **Off**
- **5 Min** : Automatically turn off the display if no movement of an object or person is detected within a certain distance for 5 minutes.
- **10 Min** : Automatically turn off the display if no movement of an object or person is detected within a certain distance for 10 minutes.
- **20 Min** : Automatically turn off the display if no movement of an object or person is detected within a certain distance for 20 minutes.
- **30 Min** : Automatically turn off the display if no movement of an object or person is detected within a certain distance for 30 minutes.
- **1 h** : Automatically turn off the display if no movement of an object or person is detected within a certain distance for 1 hours.

5. Press [∧/∨] to move to the option you want and press the [ ].
6. The selected option will be applied.

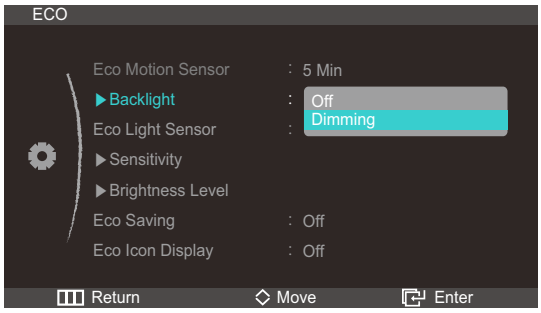
Configuring Backlight

1 Press [ ] on the product.

2 Press [∧/∨] to move to **SETUP&RESET** and press [ ] on the product.

3 Press [∧/∨] to move to **ECO** and press [ ] on the product.

4 Press [∧/∨] to move to **Backlight** and press [ ] on the product. The following screen will appear.



- **Off** : Turn off the screen and activate DPMS mode. If **Off** is selected, it takes several seconds for the monitor to detect movement and turn on after it turned off.
- **Dimming**: Reduce the brightness of the screen (still turned on).

5 Press [∧/∨] to move to the option you want and press the [ ].

6 The selected option will be applied.

- The optimal working area for **Eco Motion Sensor** is within a certain distance (1m) and atcertain angle (40°).
- If there is no user movement, the **Eco Motion Sensor** may fail to detect motion.
- If you think that the mode entry message appears too frequently, increase the time setting of the **Eco Motion Sensor** or turn the **Eco Icon Display Off**.
- Avoid using radio equipment such as a walkie-talkie near the product as this may cause a product malfuction.

7.1.2 Eco Light Sensor

The Eco Saving feature optimizes the view condition and contributes to power saving by adjusting the screen brightness depending on the ambient light intensity.

- This menu is not available when SAMSUNG MAGIC **Bright** is in **Dynamic Contrast** mode.
- This menu is not available when **Eco Saving** is enabled.

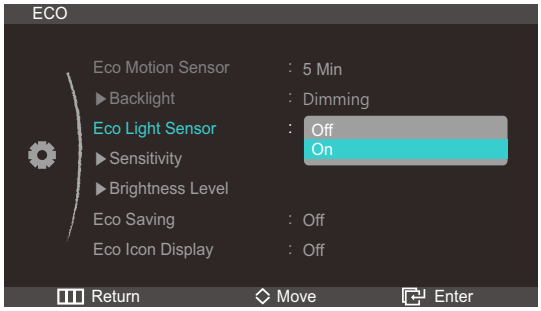
Configuring the Eco Light Sensor

1 Press [ ] on the product.

2 Press [∧/∨] to move to **SETUP&RESET** and press [ ] on the product.

3 Press [∧/∨] to move to **ECO** and press [ ] on the product.

4 Press [∧/∨] to move to **Eco Light Sensor** and press [⏎] on the product. The following screen will appear.



- **Off**
- **On**: The Eco sensor detects the ambient illumination and automatically controls the brightness.

5 Press [∧/∨] to move to the option you want and press the [⏎].

6 The selected option will be applied.

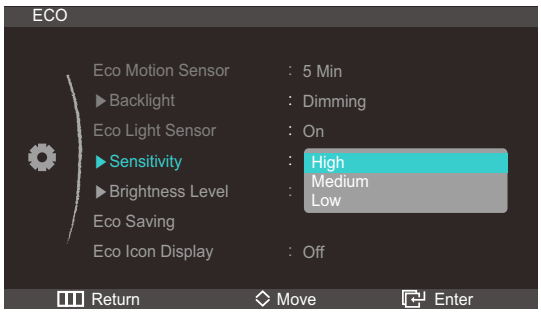
Configuring Sensitivity

1 Press [⊞] on the product.

2 Press [∧/∨] to move to **SETUP&RESET** and press [⏎] on the product.

3 Press [∧/∨] to move to **ECO** and press [⏎] on the product.

4 Press [∧/∨] to move to **Sensitivity** and press [⏎] on the product. The following screen will appear.



- **High**: High sensitivity that maximizes the varying level of screen brightness depending on the ambient light intensity.
- **Medium**: Intermediate sensitivity that sets a varying level of screen brightness between **High** and **Low** depending on the ambient light intensity.
- **Low**: Low sensitivity that minimizes the varying level of screen brightness depending on the ambient light intensity.

5 Press [∧/∨] to move to the option you want and press the [⏎].

6 The selected option will be applied.

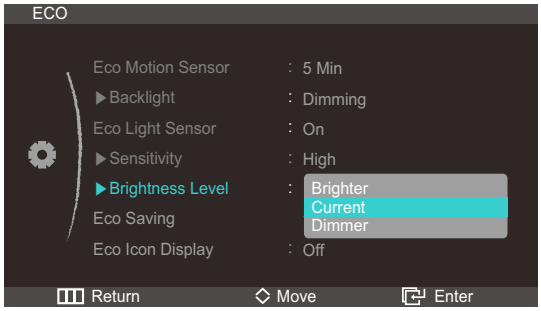
Configuring Brightness Level

1 Press [⊞] on the product.

2 Press [∧/∨] to move to **SETUP&RESET** and press [⏎] on the product.

3 Press [∧/∨] to move to **ECO** and press [⏎] on the product.

4 Press [∧/∨] to move to **Brightness Level** and press [⏎] on the product. The following screen will appear.



- **Brighter** : Increase the current brightness of the screen.
- **Current**: Maintain the current brightness of the screen.
- **Dimmer**: Decrease the current brightness of the screen.

5 Press [∧/∨] to move to the option you want and press the [⏎].

6 The selected option will be applied.

7.1.3 Eco Saving

The Eco Saving function reduces power consumption by controlling the electric current used by the monitor panel.

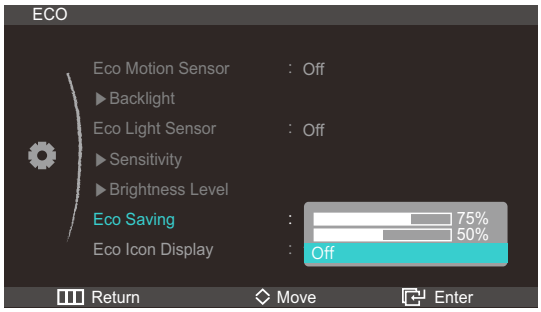
Configuring the Eco Saving Settings

1 Press [▥] on the product.

2 Press [∧/∨] to move to **SETUP&RESET** and press [⏎] on the product.

3 Press [∧/∨] to move to **ECO** and press [⏎] on the product.

4 Press [∧/∨] to move to **Eco Saving** and press [⏎] on the product. The following screen will appear.



- **75%** : Change the monitor power consumption to 75% of the default level.
- **50%** : Change the monitor power consumption to 50% of the default level.
- **Off**: Deactivate the **Eco Saving** function.

5 Press [∧/∨] to move to the option you want and press the [⏎].

6 The selected option will be applied.

- This menu is not available when SAMSUNG MAGIC Bright is in Dynamic Contrast mode.
- This menu is not available when Eco Light Sensor is enabled.

7.1.4 Eco Icon Display

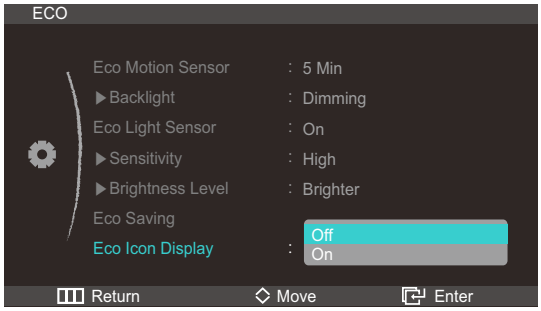
Configuring the Eco Icon Display Settings

1 Press [ ] on the product.

2 Press [∧/∨] to move to SETUP&RESET and press [ ] on the product.

3 Press [∧/∨] to move to ECO and press [ ] on the product.

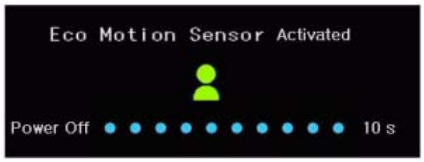
4 Press [∧/∨] to move to Eco Icon Display and press [ ] on the product. The following screen will appear.



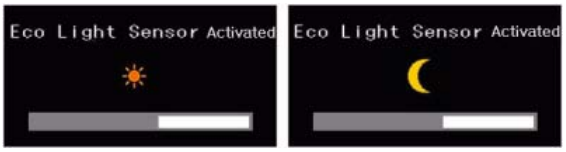
- Off: Deactivate the Eco Saving function.
- On: Display the operation status of the Eco sensor as a pop-up guide.

5 Press [∧/∨] to move to the option you want and press the [ ].

6 The selected option will be applied.

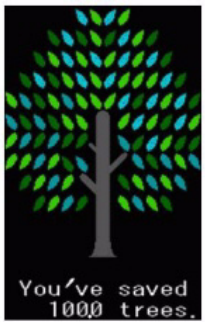


- The Eco Motion Sensor will activate power-saving mode if it is set to on and does not detect any movement for a specified time.
- A 10-second countdown timer will start along with the above picture before the power-saving mode activates showing the operation status of the Eco Motion Sensor.



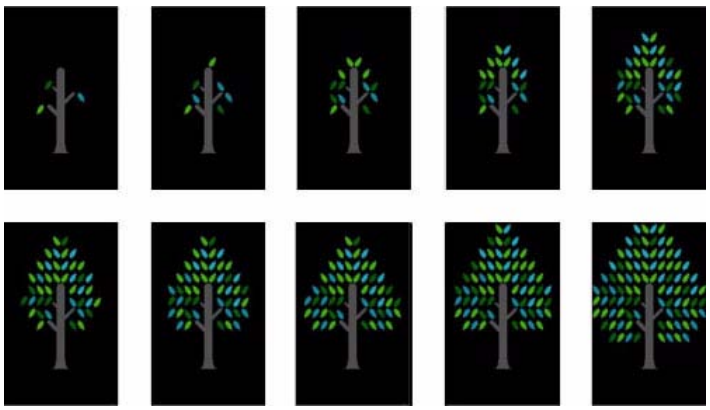
- If the screen brightness is adjusted according to the ambient light intensity when the Eco Light Sensor is on, a pop-up as shown above will appear showing the adjusting screen brightness.

- When the screen becomes brighter as the ambient light becomes brighter and the **Eco Light Sensor** activates, the brightness slide bar level will increase with a sun image displayed above the bar. When the screen becomes darker, the brightness slide bar level will decrease with a moon image displayed above the bar. The brightness slide bar will be displayed for three seconds after the sensor activates.



- A pop-up as shown above will appear when an energy tree completes while **Eco Icon Display** is on.

  If the above picture is displayed, it means the **Eco Icon Display** option is on. Change this setting to off if you do not want to display the pop-up.



- The amount of energy saved by the **Eco Motion Sensor**, **Eco Light Sensor**, and **Eco Saving** functions will accumulate and the progress can be viewed as a growing energy tree.

  The energy tree grows as the energy savings of the monitor accumulate. Accordingly, the tree's growth will also be affected by other functions that involve power consumption such as the brightness control function.

- The amount of energy savings accumulated by the **Eco Motion Sensor**, **Eco Light Sensor**, and **Eco Saving** functions will be represented as an amount of carbon dioxide.
- A complete energy tree will be displayed when the amount of energy savings accumulates to as much as the amount of carbon dioxide a tree absorbs in a year.
- This shows that your energy saving is as effective as planting a tree so that you can easily understand the accumulation of energy savings over time and its effect by viewing the progress of a tree growing.

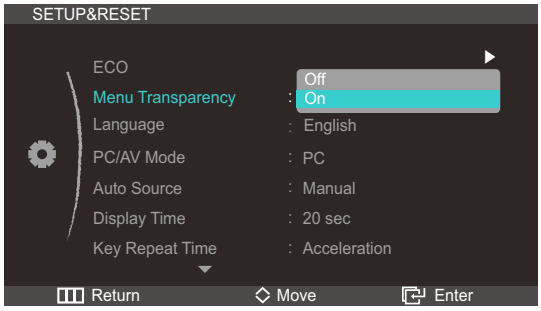
- The progress of a tree growing will be represented as 10 different images (stages). After one full-grown tree is complete, the initial image will be restored and the number of trees will continue to accumulate. The number for energy trees will be rounded to one decimal place.

7.2 Menu Transparency

Set the transparency for the menu windows:

7.2.1 Changing Menu Transparency

1. Press [ ] on the product.
2. Press [∧/∨] to move to **SETUP&RESET** and press [ ] on the product.
3. Press [∧/∨] to move to **Menu Transparency** and press [ ] on the product. The following screen will appear.



4. Press [∧/∨] to move to the option you want and press the [ ].
5. The selected option will be applied.

7.3 Language

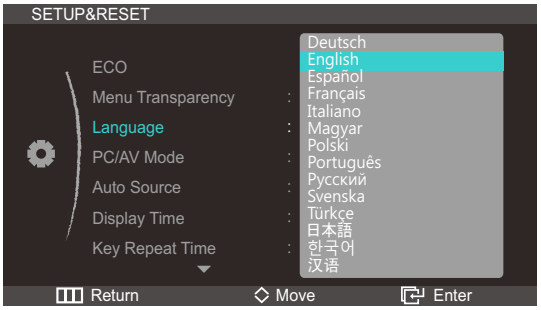
Set the menu language.

- A change to the language setting will only be applied to the on-screen menu display.
- It will not be applied to other functions on your PC.

7.3.1 Changing the Language

1. Press [ ] on the product.
2. Press [∧/∨] to move to **SETUP&RESET** and press [ ] on the product.

3 Press [∧/∨] to move to **Language** and press [⏎] on the product. The following screen will appear.



4 Press [∧/∨] to move to the option you want and press the [⏎].

5 The selected option will be applied.

7.4 PC/AV Mode

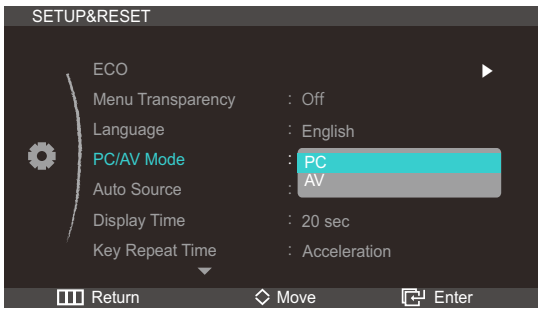
Set **PC/AV Mode** to **AV**. The picture size will be enlarged. This option is useful when you view a movie.

7.4.1 Configuring PC/AV Mode Settings

1 Press [▥] on the product.

2 Press [∧/∨] to move to **SETUP&RESET** and press [⏎] on the product.

3 Press [∧/∨] to move to **PC/AV Mode** and press [⏎] on the product. The following screen will appear.



4 Press [∧/∨] to move to the option you want and press the [⏎].

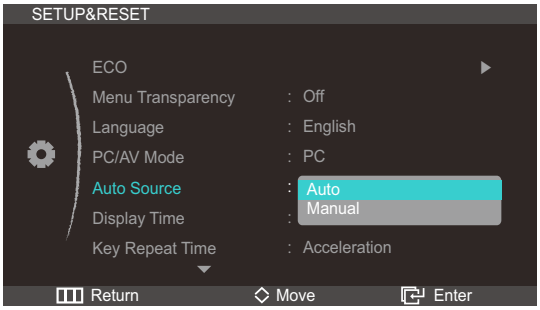
5 The selected option will be applied.

7.5 Auto Source

Activate **Auto Source**.

7.5.1 Configuring Auto Source

1. Press [ ] on the product.
2. Press [∧/∨] to move to **SETUP&RESET** and press [ ] on the product.
3. Press [∧/∨] to move to **Auto Source** and press [ ] on the product. The following screen will appear.



- **Auto**: The input source is automatically recognized.
- **Manual**: Manually select an input source.

4. Press [∧/∨] to move to the option you want and press the [ ].
5. The selected option will be applied.

7.6 Display Time

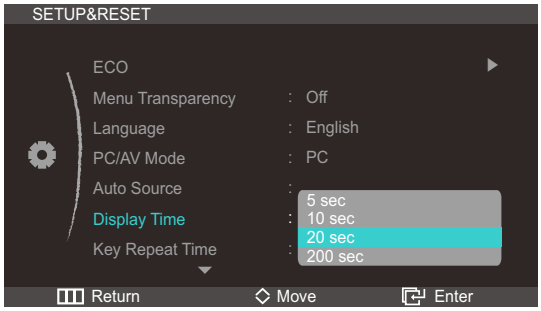
Set the onscreen display (OSD) menu to automatically disappear if the menu is not used for a specified period of time.

Display Time can be used to specify the time after which you want the OSD menu to disappear.

7.6.1 Configuring Display Time

1. Press [ ] on the product.
2. Press [∧/∨] to move to **SETUP&RESET** and press [ ] on the product.

3 Press [∧/∨] to move to **Display Time** and press [⏎] on the product. The following screen will appear.



4 Press [∧/∨] to move to the option you want and press the [⏎].

5 The selected option will be applied.

7.7 Key Repeat Time

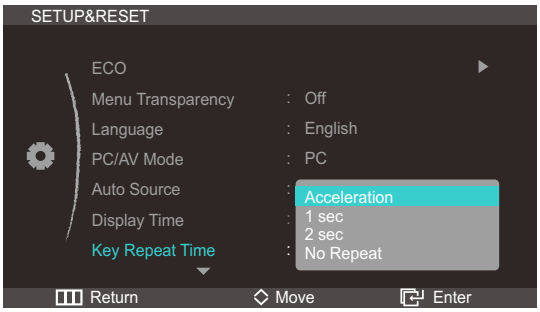
Control the response rate of a button when the button is pressed.

7.7.1 Configuring Key Repeat Time

1 Press [⊞] on the product.

2 Press [∧/∨] to move to **SETUP&RESET** and press [⏎] on the product.

3 Press [∧/∨] to move to **Key Repeat Time** and press [⏎] on the product. The following screen will appear.



- **Acceleration**, **1 sec**, or **2 sec** can be selected. If **No Repeat** is selected, a command responds only once when a button is pressed.

4 Press [∧/∨] to move to the option you want and press the [⏎].

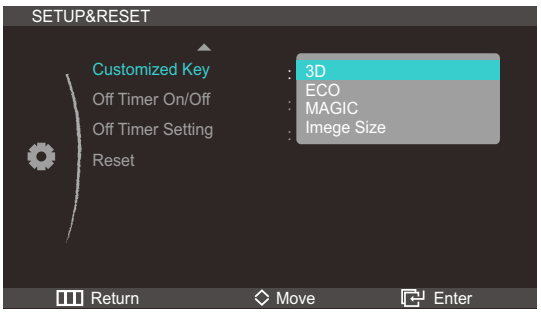
5 The selected option will be applied.

7.8 Customized Key

By configuring **Customized Key** to suit your preferences, you can change the screen settings more conveniently.

7.8.1 Configuring Customized Key

1. Press [ ] on the product.
2. Press [∧/∨] to move to **SETUP&RESET** and press [ ] on the product.
3. Press [∧/∨] to move to **Customized Key** and press [ ] on the product. The following screen will appear.



- Can be set to **3D**, **ECO** or **MAGIC**, **Image Size**.

4. Press [∧/∨] to move to the option you want and press the [ ].
5. The selected option will be applied.

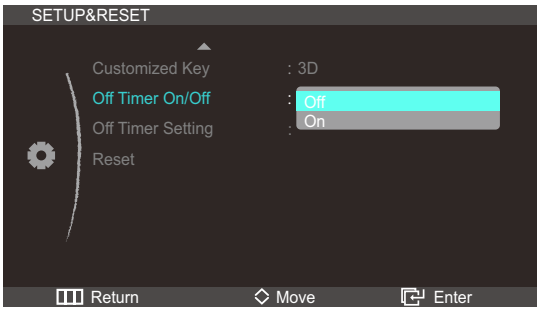
7.9 Off Timer On/Off

Enable or disable the off timer that automatically powers off the product.

7.9.1 Configuring Off Timer On/Off

1. Press [ ] on the product.
2. Press [∧/∨] to move to **SETUP&RESET** and press [ ] on the product.

3 Press [∧/∨] to move to **Off Timer On/Off** and press [⏎] on the product. The following screen will appear.



- **Off**: Deactivate the off timer so that the product does not power off automatically.
- **On**: Activate the off timer so that the product powers off automatically.

4 Press [∧/∨] to move to the option you want and press the [⏎].

5 The selected option will be applied.

7.10 Off Timer Setting

The off timer can be set within a range of 1 to 23 hours. The product will automatically power off after the specified number of hours.

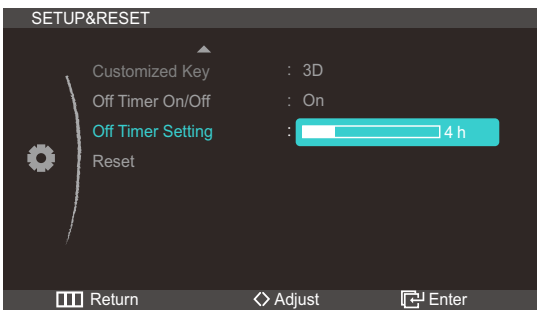
This menu is only available when **Off Timer On/Off** is set to **On**.

7.10.1 Configuring Off Timer Setting

1 Press [▥] on the product.

2 Press [∧/∨] to move to **SETUP&RESET** and press [⏎] on the product.

3 Press [∧/∨] to move to **Off Timer Setting** and press [⏎] on the product. The following screen will appear.



4 Press [</>] to configure **Off Timer Setting**.

7.11 Reset

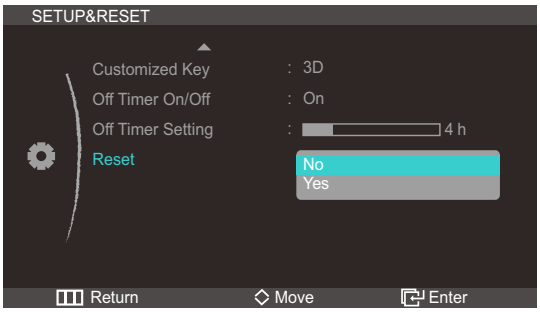
Return all the settings for the product to the default factory settings.

7.11.1 Initializing Settings (Reset)

1 Press [ ] on the product.

2 Press [∧/∨] to move to **SETUP&RESET** and press [⏎] on the product.

3 Press [∧/∨] to move to **Reset** and press [⏎] on the product. The following screen will appear.



4 Press [∧/∨] to move to the option you want and press the [⏎].

5 The selected option will be applied.

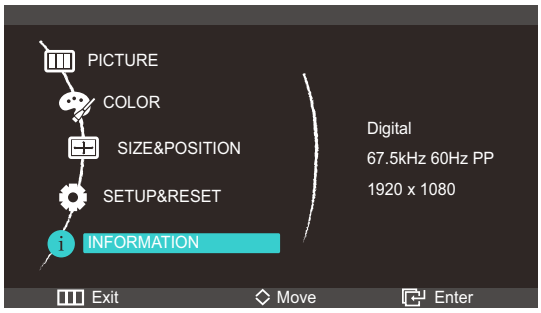
8.1 INFORMATION

View the current input source, frequency and resolution.

8.1.1 Displaying INFORMATION

1 Press [ ] on the product.

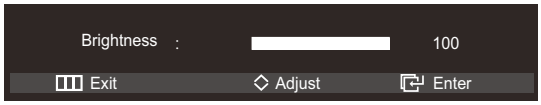
2 Press [∧/∨] to move to **INFORMATION**. The current input source, frequency and resolution will appear.



8.2 Configuring Brightness in the Startup Screen

Adjust **Brightness** using the [∧/∨] button in the startup screen where there is no on screen display menu available.

1 Press [∧/∨] in the startup screen. The following screen will appear.



2 Adjust the **Brightness** using the [∧/∨] button.

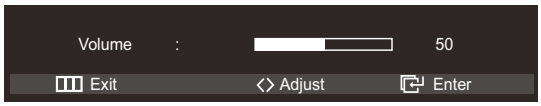
8.3 Configuring Volume in the Startup Screen

Adjust **Volume** using the [</>] button in the startup screen where there is no on screen display menu available.

Only available in **HDMI** mode.

INFORMATION Menu and Others

1 Press [</>] in the startup screen. The following screen will appear.



2 Adjust the **Volume** using the [</>] button.

9.1 Requirements Before Contacting Samsung Customer Service Center

9.1.1 Testing the Product

Before calling Samsung Customer Service Center, test your product as follows. If the problem persists, contact Samsung Customer Service Center.

Check if your product is operating normally by using the product test function.

If the screen is turned off and the power indicator blinks even though the product is properly connected to a PC, perform a self-diagnosis test.

1. Power off both the PC and product.
2. Disconnect the cable from the product.
3. Power on the product.
4. If the **Check Signal Cable** message appears, the product is working normally.

   If the screen remains blank, check the PC system, video controller and cable.

9.1.2 Checking the Resolution and Frequency

For a mode that exceeds the supported resolution (refer to "10.3 Standard Signal Mode Table"), the message **Not Optimum Mode.** will appear for a short time.

9.1.3 Check the followings.

Installation issue (PC mode)	
The screen keeps switching on and off.	Check the cable connection between the product and PC, and ensure the connection is secure. (Refer to "3.3 Connecting and Using a PC")

Screen issue	
The power LED is off. The screen will not switch on.	Check that the power cable is connected correctly (Refer to "3.3 Connecting and Using a PC")
The message **Check Signal Cable** appears.	Check that the cable is properly connected to the product. (Refer to "3.3 Connecting and Using a PC")
	Check that the device connected to the product is powered on.

Screen issue	
"**Not Optimum Mode**" is displayed.	This message appears if the signal from the graphics card exceeds the maximum resolution or frequency for the product.
	Change the maximum resolution and frequency to suit the product performance, referring to Standard Signal Mode Table (page 78).
The images on the screen look distorted.	Check the cable connection to the product (Refer to "3.3 Connecting and Using a PC")
The screen is not clear. The screen is blurry.	Remove any accessories (video extension cable, etc) and try again.
	Set the resolution and frequency to the recommended level. (Refer to "10.1 General")
The screen appears unstable and shaky.	Check that the resolution and frequency for the PC are within the range of resolution and frequency compatible with the product, and if required, change the settings, referring to Standard Signal Mode Table (page 78) in this manual and the **INFORMATION** menu on the product.
There are shadows or ghost images left on the screen.	
The screen is too bright. The screen is too dark.	Adjust **Brightness**(page 43) and **Contrast**(page 43).
Screen color is inconsistent.	Change the **COLOR** settings. (Refer to " Configuring Tint" ON PAGE 47)
The colors on the screen have a shadow and are distorted.	Change the **COLOR** settings. (Refer to " Configuring Tint" ON PAGE 47)
White does not really look white.	Change the **COLOR** settings. (Refer to " Configuring Tint" ON PAGE 47)
There is no image on the screen and the power LED blinks every 0.5 to 1 second.	The product is in power-saving mode.
	Press any key on the keyboard or move the mouse to return to the previous screen.

Sound issue	
There is no sound.	Check the connection of the audio cable or adjust the volume.
	Check the volume.

Sound issue	
The volume is too low.	Adjust the volume.
	If the volume is still low after turning it up to the maximum level, adjust the volume on your PC sound card or software program.

Source device issue	
A beeping sound is heard when my PC is booting.	If a beeping sound is heard when your PC is booting, have your PC serviced.

9.2 Q & A

Question	Answer
How can I change the frequency?	Set the frequency on your graphics card. • Windows XP: Select **Control Panel** → **Appearance and Themes** → **Display** → **Settings** → **Advanced** → **Monitor**, and adjust **Refresh rate** under **Monitor settings**. • Windows ME/2000: Select **Control Pane l** → **Display** → **Settings** → **Advanced** → **Monitor**, and adjust **Refresh rate** under **Monitor settings**. • Windows Vista: Select **Control Panel** → **Appearance and Personalization** → **Personalization** → **Display Settings** → **Advanced Settings** → **Monitor**, and adjust **Refresh rate** under **Monitor settings**. • Windows 7: Select **Control Panel** → **Appearance and Personalization** → **Display** → **Screen Resolution** → **Advanced settings** → **Monitor**, and adjust **Refresh rate** under **Monitor settings**.

Question	Answer
How can I change the resolution?	• Windows XP: Go to **Control Panel** → **Appearance and Themes** → **Display** → **Settings** and adjust the resolution. • Windows ME/2000: Go to **Control Panel** → **Display** → **Settings** and adjust the resolution. • Windows Vista: Go to **Control Panel** → **Appearance and Personalization** → **Personalize** → **Display Settings** and adjust the resolution. • Windows 7: Go to **Control Panel** → **Appearance and Personalization** → **Display** → **Adjust Resolution** and adjust the resolution.
How do I set power-saving mode?	• Windows XP: Set power-saving mode in **Control Panel** → **Appearance and Themes** → **Display** → **Screen Saver Settings** or BIOS SETUP on the PC. • Windows ME/2000: Set power-saving mode in **Control Panel** → **Display** → **Screen Saver Settings** or BIOS SETUP on the PC. • Windows Vista: Set power-saving mode in **Control Panel** → **Appearance and Personalization** → **Personalize** → **Screen Saver Settings** or BIOS SETUP on the PC. • Windows 7: Set power-saving mode in **Control Panel** → **Appearance and Personalization** → **Personalize** → **Screen Saver Settings** or BIOS SETUP on the PC.

Refer to the user manual for your PC or graphics card for further instructions on adjustment.

10.1 General

Model Name		S23A950D	S27A950D
LCD Panel	Size	23 inches (58cm)	27 inches (68cm)
	Display area	511.8 mm (H) x 288.3 mm (V) 20.1 inches (H) x 11.4 inches (V)	599.6 mm(H) x 337.7 mm (V) 23.6 inches (H) x 13.3 inches (V)
Synchronization	Horizontal Frequency	30~140khz	
	Vertical Frequency	50Hz, 100HZ, 120Hz	
Display Color		16.7 M Color (Hi-FRC)	
Resolution	Optimum resolution	1920 x 1080 @ 120 Hz	
	Maximum resolution	1920 x 1080 @ 120 Hz	
Maximum Pixel Clock		297 MHz	
Power Supply		This product uses 100 to 240V. Refer to the label at the back of the product as the standard voltage can vary in different countries.	
Signal connectors		DP, DVI, HDMI	
Dimensions (W x H x D) / Weight		533.0 x 424.5 x 185.5 mm / 5.5 kg 21.0 x 16.7 x 7.3 inches / 12.1 lbs	621.0 x 474.0 x 185.5 mm / 5.9 kg 24.4 x 18.7 x 7.3 inches / 13.0 lbs
Environmental considerations	Operating	Operating Temperature : 50° F ~ 104° F (10° C ~ 40° C) Humidity : 10 % ~ 80 %, non-condensing	
	Storage	Operating Temperature : -4° F ~ 140° F (-20° C ~ 60° C) Humidity : 5% ~ 95%, non-condensing	
Plug-and-Play		This monitor can be installed and used with any Plug-and-Play compatible systems. Two-way data exchange between the monitor and PC system optimizes the monitor settings. Monitor installation takes place automatically. However, you can customize the installation settings if desired.	
Panel Dots (Pixels)		Due to the nature of the manufacturing of this product, approximately 1 pixel per million (1ppm) may appear brighter or darker on the LCD panel. This does not affect product performance.	

The above specifications are subject to change without notice to improve quality.

This device is a Class B digital apparatus.

[Recommendation] - EU Only

CE

- Hereby, Samsung Electronics, declares that this [Monitor] is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.
- The official Declaration of Conformity may be found at http://www.samsung.com, go to Support > Search Product Support and enter the model name.
- This equipment may be operated in all EU countries.

(USA only)

Dispose unwanted electronics through an approved recycler.

To find the nearest recycling location, go to our website:

www.samsung.com/recyclingdirect Or call, (877) 278 - 0799

10.2 PowerSaver

The power-saving function of this product reduces power consumption by switching off the screen and changing the color of the power LED if the product is not used for a specified period of time. The power is not turned off in power-saving mode. To switch the screen back on, press any key on the keyboard or move the mouse. Power-savign mode only functions when the product is connected to a PC with a power-saving function.

S23A950D

PowerSaver	Normal Operation	Power saving mode	Power off (Power button)
Power Indicator	On	Blinking	Off
Power Consumption	46 W	less than 1.2W	1W or lower

S27A950D

PowerSaver	Normal Operation	Power saving mode	Power off (Power button)
Power Indicator	On	Blinking	Off
Power Consumption	55 W	less than 1.2W	1W or lower

- The displayed power consumption level can vary in different operating conditions or when settings are changed.
- To reduce the power consumption to 0 watts, turn off the power switch on the back of the product or disconnect the power cable. Be sure to disconnect the power cable when you will not be using the product for an extended period of time. To reduce the power consumption to 0 watts when the power switch is not available, disconnect the power cable.

10.3 Standard Signal Mode Table

This product can be set to only one resolution for each screen size to obtain the optimum picture quality due to the nature of the panel. Therefore, a resolution other than the specified resolution may degrade the picture quality. To avoid this, it is recommended that you select the optimum resolution specified for the screen size of your product.

If a signal that belongs to the following standard signal modes is transmitted from your PC, the screen will automatically be adjusted. If the signal transmitted from the PC does not belong to the standard signal modes, the screen may be blank with the power LED on. In such a case, change the settings according to the following table by referring to the graphics card user manual.

DP

Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Pixel Clock(MHz)	Sync Polarity(H/V)
1920 x 1080 100 Hz	113.221	99.930	235.500	+ / -
1920 x 1080 120 Hz	137.260	119.982	285.500	+ / -

DVI

Resolution	Horizontal Frequency(kHz)	Vertical Frequency(Hz)	Pixel Clock(MHz)	Sync Polarity(H/V)
1920 x 1080 60 Hz	67.500	60.000	148.500	+ / +
1920 x 1080 100 Hz	113.221	99.930	235.500	+ / -
1920 x 1080 120 Hz	137.260	119.982	285.500	+ / -

HDMI

Resolution	Horizontal Frequency(kHz)	Vertical Frequency(Hz)	Pixel Clock(MHz)	Sync Polarity(H/V)
800 x 600 56 Hz	35.156	56.250	36.000	+ / +
800 x 600 60 Hz	37.879	60.317	40.000	+ / +
1024 x 768 60 Hz	48.363	60.004	65.000	- / -
1280 x 800 60 Hz	49.702	59.810	83.500	- / +
1280 x 960 60 Hz	60.000	60.000	108.000	+ / +
1280 x 1024 60 Hz	63.981	60.020	108.000	+ / +
1440 x 900 60 Hz	55.935	59.887	106.500	- / +
1680 x 1050 60 Hz	65.290	59.954	146.250	- / +
1920 x 1080 60 Hz	67.500	60.000	148.500	+ / +
640 x 480 60 Hz, 480p	31.470	59.940	25.180	- / -
720 x 480 60 Hz, 480p	31.470	59.940	27.000	- / -
720 x 576 50 Hz, 576p	31.250	50.000	27.000	- / -
1280 x 720 50 Hz, 720p	37.500	50.000	74.250	+ / +
1280 x 720 60 Hz, 720p	45.000	60.000	74.250	+ / +
1920 x 1080 24 Hz, 1080i	27.000	24.000	74.250	+ / +

Resolution	Horizontal Frequency(kHz)	Vertical Frequency(Hz)	Pixel Clock(MHz)	Sync Polarity(H/V)
1920 x 1080 50 Hz, 1080p	56.250	50.000	148.500	+ / +
1920 x 1080 60 Hz, 1080p	67.500	60.000	147.500	+ / +

- Horizontal Frequency

  The time required to scan a single line from the left to the right side of the screen is called a horizontal cycle. The reciprocal number of a horizontal cycle is called horizontal frequency. Horizontal frequency is measured in kHz.

- Vertical Frequency

  Repeating the same picture dozens of times per second allows you to view natural pictures. The repeat frequency is called "vertical frequency" or "refresh rate" and is indicated in Hz.

Contact SAMSUNG WORLD WIDE

If you have any questions or comments relating to Samsung products, please contact the SAMSUNG customer care center.

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EL SALVADOR	800-6225	http://www.samsung.com/latin (Spanish) http://www.samsung.com/latin_en (English)

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HONDURAS	800-27919267	http://www.samsung.com/latin (Spanish) http://www.samsung.com/latin_en (English)
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AUSTRIA	0810 - SAMSUNG (7267864, € 0.07/min)	http://www.samsung.com
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Correct Disposal of This Product (Waste Electrical & Electronic Equipment)

(Applicable in countries with separate collection systems)

This marking on the product, accessories or literature indicates that the product and its electronic accessories (e.g. charger, headset, USB cable) should not be disposed of with other household waste at the end of their working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate these items from other types of waste and recycle them responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take these items for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract. This product and its electronic accessories should not be mixed with other commercial wastes for disposal.

Terminology

OSD(On Screen Display)

On screen display (OSD) allows you to configure on-screen settings to optimize the picture quality as required. It allows you to change the screen brightness, tint, size and many other settings using menus displayed on the screen.

Gamma

The Gamma menu adjusts the grey scale that represents middle tones on the screen. Adjusting the brightness brightens the whole screen, but adjusting Gamma only brightens the medium brightness.

Grey scale

Scale refers to levels of color intensity that show variations of color change from darker areas to brighter areas on the screen. Changes to the screen brightness are expressed with black and white variation, and grey scale refers to the medium area between black and white. Changing the grey scale through Gamma adjustment will change the medium brightness on the screen.

Scanning rate

Scanning rate, or refresh rate, refers to the frequency of screen refreshes. Screen data is transmitted as it refreshes to display an image, although the refreshing is invisible to the naked eye. The number of screen refreshes is called scanning rate and is measured in Hz. A scanning rate of 60Hz means that the screen refreshes 60 times per second. The screen scanning rate depends on the performance of the graphics cards in your PC and monitor.

Horizontal Frequency

Characters or images displayed on the monitor screen consist of numerous dots (pixels). Pixels are transmitted in horizontal lines, which are then arranged vertically to create an image. The horizontal frequency is measured in kHz and represents how many times horizontal lines per second are transmitted and displayed on the monitor screen. A horizontal frequency of 85 means that the horizontal lines that make up an image are transmitted 85 000 times per second, and the horizontal frequency is indicated in 85kHz.

Vertical Frequency

One image is made of numerous horizontal lines. The vertical frequency is measured in Hz and represents how many images can be created per second by those horizontal lines. A vertical frequency of 60 means that an image is transmitted 60 times per second. The vertical frequency is also called "refresh rate" and affects screen flicker.

Resolution

Resolution is the number of horizontal pixels and vertical pixels that form a screen. It represents the level of display detail.

A higher resolution displays a greater amount of information on the screen and is suitable for performing multiple tasks at the same time.

E.g. A resolution of 1920 x 1080 consists of 1,920 horizontal pixels (horizontal frequency) and 1,080 vertical lines (vertical resolution).

Plug & Play

The Plug & Play feature allows the automatic exchange of information between a monitor and PC to produce an optimum display environment.

The monitor uses VESA DDC (international standard) to execute Plug & Play.

Index

Numerics

3D 26

A

Appendix 81

Auto Source 63

C

Checking the Resolution and Frequency 70

Cleaning 4

Configuring Tint 47

Connecting Headphones 39

Connecting to a PC 33

Connecting to a Video Device 39

Contact SAMSUNG WORLD WIDE 81

Copyright 2

Correct posture to use the product 13

Customized Key 65

E

Eco Saving 58

F

Frontal Buttons 21

H

HDMI Black Level 45

I

INFORMATION 68

K

Kensington Lock 24

M

MAGIC 40

O

OSD control lock 22

P

PowerSaver 77

Precautions for storage 5

R

Removing the Packaging 19

Response Time 45

Reverse Side 23

S

Safety Precautions 5

Securing the Installation Space 5

Setting Optimum Resolution 36

Standard Signal Mode Table 78

SyncMaster 3D GAME Launcher (TriDef 3D) 30

T

Terminology 88

Testing the Product 70

Tidying Up the Connected Cables 24

Troubleshooting Guide 70

V

Volume 68

W

Wide 51